



# भारत का राजपत्र The Gazette of India

प्राधिकार से प्रकाशित  
PUBLISHED BY AUTHORITY

सं० 21]  
No. 21]

नई दिल्ली, शनिवार, मई 25, 1991 (ज्येष्ठ 4, 1913)  
NEW DELHI, SATURDAY, MAY 25, 1991 (JYAISTHA 4, 1913)

इस भाग में भिन्न पृष्ठ संख्या दी जाती है जिससे कि यह अलग संकलन के रूप में रखा जा सके  
[Separate paging is given to this Part in order that it may be filed as a separate compilation]

## भाग III—खण्ड 2 [PART III—SECTION 2]

पेटेंट कार्यालय द्वारा जारी की गई पेटेंटों और डिजाइनों से सम्बन्धित अधिसूचनाएं और नोटिस  
[Notifications and Notices Issued by the Patent Office relating to Patents and Designs]

THE PATENT OFFICE  
PATENTS AND DESIGNS  
Calcutta, the 25th May, 1991

### ADDRESS AND JURISDICTION OF OFFICES OF THE PATENT OFFICE

The Patent Office has its Head Office at Calcutta and Branch Offices at Bombay, Delhi and Madras having territorial jurisdiction on a zonal basis as shown below :—

Patent Office Branch,  
Todi Estates, III Floor,  
Lower Parel (West),  
Bombay-400 013.

The States of Gujarat, Maharashtra and Madhya Pradesh and the Union Territories of Goa, Daman and Diu and Dadra and Nagar Haveli.

Telegraphic address "PATOFFICE".

Patent Office Branch,  
Unit No. 401 to 405, III Floor,  
Municipal Market Building,  
Saraswati Marg, Karol Bagh,  
New Delhi-110 005.

The States of Haryana, Himachal Pradesh, Jammu and Kashmir, Punjab, Rajasthan and Uttar Pradesh and the Union Territories of Chandigarh and Delhi.

Telegraphic address "PATENTOFIC".

Patent Office Branch,  
61, Wallajah Road,  
Madras-600 002.

The States of Andhra Pradesh, Karnataka, Kerala, Tamilnadu, and the Union Territories of Pondicherry, Laccadive, Minicoy and Aminidivi Islands.

Telegraphic address "PATENTOFIS".

Patent Office (Head Office),  
"NIZAM PALACE", 2nd M.S.O. Bldg.,  
5th, 6th and 7th Floor,  
234/4, Acharya Jagdish Bose Road,  
Calcutta-700 020.

Rest of India.

Telegraphic address "PATENTS".

All applications, notices, statements or other documents or any fees required by the Patents Act, 1970 or the Patents Rules, 1972 will be received only at the appropriate Offices of the Patent Office.

**Fees :—**The fees may either be paid in cash or may be sent by Money Order or Postal Order, payable to the Controller at the appropriate Offices or by Bank Draft or Cheque, payable to the Controller drawn on a scheduled bank at the place where the appropriate office is situated.

पेटेंट कार्यालय

एकस्व तथा अमिकल्प

कलकत्ता, दिनांक 25 मई 1991

पेटेंट कार्यालय के कार्यालयों के पते एवं क्षेत्राधिकार

पेटेंट कार्यालय का प्रधान कार्यालय कलकत्ता में स्थित है तथा बम्बई, दिल्ली एवं मद्रास में इसके शाखा कार्यालय हैं, जिनके प्रादेशिक क्षेत्राधिकार जोन के आधार पर निम्न रूप में प्रदर्शित हैं :—

पेटेंट कार्यालय शाखा, टोडी हस्टेट,  
तीसरा तल, लोखर परेल (पश्चिम),  
बम्बई-400 013

गुजरात, महाराष्ट्र तथा मध्य प्रदेश राज्य क्षेत्र एवं संघ शासित क्षेत्र गोवा,  
मदन तथा डिव एवं दादरा और नगर हवेली।

सार पता—“पेटेंटोफिस”

पेटेंट कार्यालय शाखा,  
इकाई सं० 401 से 405, तीसरा तल,  
नगरपालिका बाजार मदन,  
सरस्वती मार्ग, करोल बाग,  
नई दिल्ली-110 005

हरियाणा, हिमाचल प्रदेश, जम्मू तथा कश्मीर, पंजाब, राजस्थान तथा  
उत्तर प्रदेश राज्य क्षेत्रों एवं संघ शासित क्षेत्र चंडीगढ़ तथा दिल्ली।

सार पता—“पेटेंटोफिस”

पेटेंट कार्यालय शाखा,  
61, वाशाजाह रोड,  
मद्रास-600 002

आंध्र प्रदेश, कर्नाटक, केरल, तमिलनाडु राज्य क्षेत्र एवं संघ शासित क्षेत्र  
पाण्डिचेरी, लक्षद्वीप, मिनिर्कोय तथा एमिनिदिवि द्वीप।

सार पता—“पेटेंटोफिस”

पेटेंट कार्यालय (प्रधान कार्यालय),  
निजाम पैलेस, द्वितीय बहुतलीय कार्यालय  
मदन 5, 6 तथा 7वां तल,  
234/4, आचार्य जगदीश बोस रोड,  
कलकत्ता-700 020

भारत का अवशेष क्षेत्र

सार पता—“पेटेंट्स”

पेटेंट अधिनियम, 1970 या पेटेंट नियम, 1972 में अपेक्षित सभी  
आवेदन-पत्र, सूचनाएं, विवरण या अन्य प्रलेख पेटेंट कार्यालय के केवल  
उपयुक्त कार्यालय में ही प्राप्त किए जाएंगे।

शुल्क : —शुल्कों की अदायगी या तो नकद की जाएगी अथवा उपयुक्त  
कार्यालय में नियंत्रक को भुगतान योग्य धनादेश अथवा डाक आदेश या जहां  
उपयुक्त कार्यालय स्थित है, उस स्थान के अनुसूचित बैंक से नियंत्रक को  
भुगतान योग्य बैंक द्राफ्ट अथवा बैंक द्वारा की जा सकती है।

## CORRIGENDUM

In the Gazette of India, Part-III, Section-2, dated 23rd March, 1991 at Page No. 337, under the heading “APPLICATION FOR PATENTS FILED AT THE HEAD OFFICE, 234/4, ACHARYA JAGADISH BOSE ROAD, CALCUTTA-20” include 154/Cal/91 Samsung Electron Devices Co. Ltd. Sealing apparatus for electron gun of cathode ray tube.

APPLICATION FOR PATENTS FILED AT THE HEAD OFFICE  
234/4, ACHARYA JAGADISH BOSE ROAD, CALCUTTA-20

The dates shown in the crescent brackets are the dates claimed  
Under Section 135, of the Patents Act, 1970.

The 11th April, 1991

- 279/Cal/91 E.I. Du Pont De Nemours and Company. Process for modifying polyamide dyeability using co-fed polyamide flake.
- 280/Cal/91 E.I. Du Pont De Nemours and Company. Anthraquinones as inhibitors of sulfide production from sulfate-reducing bacteria.
- 281/Cal/91 Digital Equipment Corp. Apparatus and method for data induced condition signalling.  
[Divisional date 28th June, 1988]

282/Cal/91 Kabelmetal Electro Gasellschaft Mit Beschränkter Haftung. A method and circuitry for regulating the welding current.

283/Cal/91 Franz Plasser Bahnbaumaschinen-Industriegesellschaft m.b.H. Track tamping machine having tamping units displaceable in a direction transversely of the track.

The 12th April, 1991

284/Cal/91 J & M Turner, Inc. Direct tension indicator washer.

285/Cal/91 Westinghouse Electric Corporation. Improvements in or relating to turbine efficient valve position computer.

286/Cal/91 Hoechst Celanese Corporation. Method for producing 4-(2'-Methoxyethyl) Phenol.

The 15th April, 1991

287/Cal/91 Vivekanand Jha. Cool Umbrella.

288/Cal/91 Vivekanand Jha. New/Improved thermos which keeps hot milk/tea safe.

289/Cal/91 E.I. Du Pont De Nemours and Company. Catalytic equilibration to improve the relative yield of selected halocarbons.

290/Cal/91 White Consolidated Industries, Inc. Hermetic refrigeration compressor.

291/Cal/91 Copyguard Enterprises S.A. A method and an apparatus for preventing unauthorised copying of video signals on tape.

The 16th April, 1991

292/Cal/91 Abanindra Nath Ghosh. A device for supplying hot air into internal combustion engines.

293/Cal/91 Samsung Corning Co. Ltd. Panel and Funnel transfer system for making cathod ray tube.

294/Cal/91 American Cyanamid Company. Immunologic enhancement of the somatogenic effect of somatotropin with an antibody.

The 18th April, 1991

295/Cal/91 Du Pont Canada Inc. Pouch dispenser.  
(Convention date 2nd May, 1990; No. 90. 09846) (U.K.).

296/Cal/91 Bomin Solar GmbH & Co. Kg. Stirling cycle engine.

297/Cal/91 Mikrosa Werkzeugmaschinen GmbH. Appliance to position paired headed parts, especially headed valves in machines for centreless grinding.

298/Cal/91 Indian Aluminium Company, Limited. Paint for selective nitriding of steel surfaces.

299/Cal/91 Indian Aluminium Company, Limited. Improved lubricant composition for cutting of aluminium extruded sections.

The 19th April, 1991

300/Cal/91 Krypton Industries Ltd. A method for manufacturing micro-cellular polyurethane tyres.

301/Cal/91 (1) Tsentralny Nauchno-Issledovatel'sky Avtomobilnyy Institut; (2) Aktsionernoe Obschestvo "Kamaz". Fuel system of an internal combustion engine.

302/Cal/91 KSB Aktiengesellschaft. A valve member.

APPLICATIONS FOR PATENTS FILED AT THE PATENT OFFICE BRANCH, MUNICIPAL MARKET BUILDING, THIRD FLOOR, KAROL BAGH, NEW DELHI-110005

The 18th March, 1991

216/Del/91 Sachin Sharma, "Mopping and cleaning machine".

217/Del/91 G. S. Sharma, "Geared gang saw machine for marble block cutting".

218/Del/91 Powcon Incorporated, "Apparatus employing a welding power supply for powering a plasma cutting torch".

219/Del/91 BP Chemicals Ltd., "Supported polyolefin catalyst for the (co-) polymerization of ethylene in gas phase".

The 19th March, 1991

220/Del/91 The Procter & Gamble Co., "Cleansing products".  
(Convention date 27th March & April, 90) (U.K.).

221/Del/91 Sudhir Arora, "A remote control for a solenoid operated transcriber".

The 20th March, 1991

222/Del/91 Ingolf Klyde, "A ball valve".

223/Del/91 Exxon Research and Engineering Co., "Apparatus and method for regenerating deactivated zeolite reforming catalysts".

224/Del/91 Shell Internationale Research Maatschappij B. V., "Styrene-isoprene-styrene block copolymer composition for low viscosity low application temperature hot melt adhesives".

225/Del/91 Shell Internationale Research Maatschappij B. V., "Styrene-isoprene-styrene block copolymer composition for low viscosity low application temperature hot melt adhesives".

226/Del/91 Imperial Chemical Industries PLC, "A closed container and a capsule for use in a device for introducing flowable additive into paint, varnish or woodstain".  
[Divisional date 2nd February, 1988].

227/Del/91 Colgate-Palmolive Co., "Toothbrush".

228/Del/91 Colgate-Palmolive Co., "Plaque removing toothbrush".

229/Del/91 Gould Inc., "Improved protected conductive foil assemblage and procedure for preparing same using static electrical forces".

230/Del/91 The Standard Oil Co., "High pressure facilitated membranes for selective separation and process for use thereof".

The 21st March, 1991

231/Del/91 Saurabh Natverlal Kinariwala, "A method of constructing a rotary traverse roll".

232/Del/91 Indian Council of Medical Research, "A process for the preparation of thrombinase".

The 21st March, 1991

233/Del/91 Indian Council of Medical Research, "A process for the preparation of cyclosporin A".

234/Del/91 Rohm & Haas Co., "Process for making controlled, uniform-sized polymer particles".

235/Del/91 Deutsche Automobilgesellschaft mbH, "An aqueous nickel hydroxide or hydrated nickel oxide paste".

- 236/Del/91 E.R. Squibb & Sons, Inc., "Trifluoromethyl mercaptan and mercaptoacyl derivatives and method of using same".

The 22nd March, 1991

- 237/Del/91 The Procter & Gamble Co., "Peroxy acid bleach precursors and detergent compositions containing them". (Convention date 31st March, 90) (U.K.).

- 238/Del/91 Imperial Chemical Industries PLC., "Method of explosively bonding composite metal structures". (Convention date 11th April, 90) (U.K.).

- 239/Del/91 The Gillette Co., "Safety razors and blade units therefor". (Convention date 27th March, 1990) (U.K.).

- 240/Del/91 Bergwerksverband GMBH, "Reactor chamber door for jumbo coking reactor".

- 241/Del/91 Ingersoll-Rand Co., "Journal bearing with high stiffness".

- 242/Del/91 C.R. Bard, Inc., "Lubricious hydrogel coatings".

- 243/Del/91 Council of Scientific & Industrial Research, "A process for the extraction of potassium from glauconitic sandstone useful for fertilizer application".

- 244/Del/91 Council of Scientific & Industrial Research, "A process for the preparation of a PK composition from glauconitic sandstone useful for fertiliser application".

- 245/Del/91 Council of Scientific & Industrial Research, "A process for the preparation of a PK composition from glauconitic sandstone using low grade rock phosphate".

- 246/Del/91 Council of Scientific & Industrial Research, "A process for producing a PK composition useful for fertiliser application from glauconitic sandstone".

- 247/Del/91 Council of Scientific & Industrial Research, "A process for the extraction of potash from glauconitic sandstone by using common salt".

**APPLICATIONS FOR PATENTS FILED IN THE PATENT OFFICE BRANCH AT TODI ESTATES, 3RD FLOOR, SUNMILL COMPOUND, LOWER PAREL (WEST) BOMBAY-13**

The 26th March, 1991

- 87/Bom/91 Mrs. Swati Nitin Shukla & Mr. Nitin Rajeshwar Shukla. Packing perishable products like fruit, vegetables, processed foods medicines, etc. to preserve their original taste flavor & color.

- 88/Bom/91 Hindustan Lever Ltd. Cosmetic composition.

- 89/Bom/91 Hindustan Lever Ltd. Cosmetic composition.

- 90/Bom/91 Hindustan Lever Ltd. Cosmetic composition.

The 27th March, 1991

- 91/Bom/91 Boots Pharmaceuticals Ltd. A process for preparing phenyl amidine & phenyl guanidine compounds for the treatment of hyperglycemia.

**ALTERATION OF DATE UNDER SEC. 16**

168726 : Ante-dated to 27th October, 1984.  
(607/Del/87)

168738 : Ante-dated to 17th March, 1986.  
(247/Cal/88)

168739 : Ante-dated to 17th March, 1986.  
(248/Cal/88)

168740 : Ante-dated to 1st March, 1985.  
(363/Cal/89)

**CLAIM UNDER SECTION 20 (1) OF THE PATENTS ACT, 1970**

In pursuance of leave granted under Section 20(1) of the Patents Act 1970, application No. 746/Del/85 of Uniroyal Inc. has been allowed to proceed in the name of Uniroyal Chemical Company Inc.

**CLAIM UNDER SECTION 20(1) OF THE PATENTS ACT, 1970**

In pursuance of leave granted under Section 20(1) of the Patents Act, 1970, application No. 164174 (747/Del/85) of Uniroyal Inc., has been allowed to proceed in the name of Uniroyal Chemical Company Inc.

**PRINTED SPECIFICATION CHALLAN**

A limited number of Printed Copies of the undernoted Specifications are available for sale from the PATENT OFFICE, CALCUTTA and its three branches at Bombay, Madras and Delhi at Rs. 2/- (Rupees two only) per copy.

(1)

158194 158195 158196 158197 158198 158199 158200 158201 158202  
158203 158204 158205 158206 158207 158208 158209 158210 158211  
158212 158213 158214 158215 158216 158217 158218 158219 158220  
158221 158222 158223 158224 158225 158226 158227 158228 158229  
158230 158231 158232 158233

(2)

158234 158235 158236 158237 158238 158239 158240 158241 158242  
158243 158244 158245 158246 158247 158248 158249 158250 158251  
158252 158253 158254 158255 158256 158257 158258 158259 158260  
158261 158262 158263

**PATENTS SEALED**

158802 164520 166500 166723 166724 166725 166728 166729 166730  
166732 166733 166739 166752 166753 166754 166755 166756 166759  
166773 166774 166777 166778 166779 166818 166820 166837 166902  
167040 167067 167068

Cal—1  
Del—21  
Mas—3  
Bom—5

## AMENDMENT PROCEEDINGS UNDER SECTION 57

Notice is hereby given that M/s EAGLE FLASK INDUSTRIES LIMITED, an Indian Company having its registered office at Eagle Estate, Talegaon-410507, District Pune, Maharashtra, India have made an application under Section 57 of the Patents Act, 1970 for amendment by way of altering the name of applicants and their address for service in Patent application complete specification in respect of Patent Application No. 167529 (10/Bom/1989) for "An improved cooking device". The application for amendment and proposed amendment can be inspected free of charge at the Patent Office Branch, Todi Estate, 3rd Floor, Sun Mill Compound, Lower Parel (W), Bombay-400 013 on any working day during the usual office hours or copies of the same can be had on payment of the usual copying charges. Any person interested in opposing the application for amendment may file the notice of opposition on the prescribed form-30 along with full written statement within three months from the date of this notification at the Patent Office Branch, Bombay.

If full written statement of opposition is not filed with the notice of opposition it should be filed within one month from the date of filing the said notice of opposition.

Notice is hereby given that M/s EAGLE FLASK INDUSTRIES LIMITED, an Indian Company having its registered office at Eagle Estate, Talegaon-410507, District Pune, Maharashtra, India have made an application under Section 57 of the Patents Act, 1970 for amendment by way of altering the name of applicants and their address for service in Patent application complete specification in respect of Patent Application No. 167964 (11/Bom/1989) for "An improved heating pad". The application for amendment and proposed amendment can be inspected free of charge at the Patent Office Branch, Todi Estate, 3rd Floor, Sun Mill Compound, Lower Parel (W), Bombay-400 013 on any working day during the usual office hours or copies of the same can be had on payment of the usual copying charges. Any person interested in opposing the application for amendment may file the notice of opposition on the prescribed form-30 along with full written statement within three months from the date of this notification at the Patent Office Branch, Bombay.

If full written statement of opposition is not filed with the notice of opposition it should be filed within one month from the date of filing the said notice of opposition.

Proposed amendments under Section 57 of the Patents Act, 1970 in respect of Patent No. 166492 as advertised in the Gazette of India dated 3-11-1990 have been allowed.

Notice is hereby given that SCHUBERT & SALZER MASCHINENFABRIK AKTIENGESellschaft OF FRIEDRICH-EBERT-STRASSE 84, 8070, INGOLSTADT, WEST GERMANY, have made an application under Section 57 of the Patents Act, 1970 for amendment of application and specification of their application for Patent No. 168077 for "METHOF AND DEVICE FOR PRODUCING YARN BY JOINING THEREOF IN AN OPEN END FRICTION SPINNING APPARATUS". The amendments are by way of correction. The application for amendments and the proposed amendments can be inspected free of charge at the Patent Office Branch, 61, Wallajah Road, Madras-600 002, or copies of the same can be had on payment of the usual copying charges. Any person interested in opposing the application for amendment may file a Notice of Opposition on prescribed Form-30 within 3 months from the date of the Notification at the Patent Office, Madras-2. If the written Statement of Opposition is not filed with the Notice of opposition, it shall be left within one month from the date of filing the said Notice.

Notice is hereby given that NORMALAIR-GARRETT (HOLDINGS) LTD., WESTLAND WORKS, YEEVIL, SOMERSET, ENGLAND, have made an application under Section 57 of the Patents Act, 1970 for amendment of application and specification of their application for Patent No. 167888 for "FUSE FLOW CONTROL/VALVE". The amendments are by way of correction. The application for amendments and the proposed amendments can be inspected free of charge at the Patent Office, Branch, 61, Wallajah Road, Madras-600 002, or copies of the same can be had on payment of the usual copying charges. Any person interested in opposing the application for amendment may file a Notice of Opposition on prescribed Form-30 within 3 months from the date of the Notification at the Patent Office, Madras-2. If the written Statement of Opposition is not filed with the Notice of Opposition, it shall be left within one month from the date of filing the said Notice.

The amendments proposed by IEL Limited in respect of application for Patent No. 164765 as advertised in Part III, Section 2 of the Gazette of India dated the 3rd March 1990 have been allowed.

The amendments proposed by J. F. ADOLFF in respect of application for Patent No. 166198 as advertised in Part III, Section 2 of the Gazette of India dated the 17th March, 1990 have been allowed.

## RENEWAL FEES PAID

148268 148622 148716 149035 150424 150749 151032 151076 151312  
151604 151939 151947 151999 152334 152441 152565 152687 152734  
152876 152938 153349 154362 155119 155267 155282 155670 155993  
156199 156697 156969 157030 157222 157513 157594 157635 157637  
157772 157812 158164 158215 158216 158584 158593 158950 158952  
159030 159052 159121 159232 159295 159296 159539 159916 160811  
160987 160988 160993 161033 161034 161221 161383 161399 161757  
161813 161939 162076 162183 162199 162594 162793 162826 163745  
163894 163951 164043 164046 164088 164138 164322 164328 164698  
164819 164854 164999 165870 166327

## COMPLETE SPECIFICATION ACCEPTED

Notice is hereby given that any person interested in opposing the grant of patents on any of the Applications concerned, may, at any time within four months of the date of this issue or within such further period not exceeding one month applied for on Form 14 prescribed under the Patents Rules, 1972 before the expiry of the said period of four months, give notice to the Controller of Patents on the prescribed Form 15, of such opposition. The written statement of opposition should be filed along with the said notice or within one month of its date as prescribed in Rule 36 of the Patents Rules, 1972.

The classifications given below in respect of each specification are according to Indian Classification and International Classification.

A limited number of printed copies of the specifications listed below will be available for sale from the Government of India Book Depot, 8, Kiran Sankar Roy Road, Calcutta, in due course. The price of each specification is Rs. 2/- (postage extra if sent out of India). Requisition for the supply of the printed specifications should be accompanied by the number of the specifications as shown in the following list.

Typed or photo copies of the specifications together with photo copies of the drawings, if any, can be supplied by the Patent Office, Calcutta on payment of the prescribed copying charges which may be ascertained on application to that office. Photo copying charges may be calculated by adding the number of pages in the specification and drawing sheets mentioned below against each accepted specification and multiplying the same by four to get the charges as the copying charges per page are Rs. 4/-.

### स्वीकृत सम्पूर्ण विनिर्देश

एतद्वारा यह सूचना दी जाती है कि सम्बद्ध आवेदनों में से किसी पर पेटेंट अनुदान का विरोध करने के इच्छुक कोई व्यक्ति, इसके निर्गम की तिथि से 4 महीने या अग्रिम ऐसी अवधि जो उक्त 4 महीने की अवधि की समाप्ति के पूर्व पेटेंट नियम, 1972 के तहत विहित प्रपत्र-14 पर आवेदित एक महीने की अवधि से अधिक न हो, के भीतर कभी भी नियंत्रक, एकस्व को ऐसे विरोध की सूचना विहित प्रपत्र-15 पर दे सकते हैं। विरोध सम्बन्धी लिखित वक्तव्य, उक्त सूचना के साथ अथवा पेटेंट नियम, 1972 के नियम 36 में यथाविहित इसकी तिथि के एक महीने के भीतर ही फाइल किए जाने चाहिए।

"प्रत्येक विनिर्देश के संदर्भ में नीचे दिए वर्गीकरण, भारतीय वर्गीकरण तथा अन्तरराष्ट्रीय वर्गीकरण के अनुरूप है।"

नीचे सूचीगत विनिर्देशों की सीमित संख्या में मुद्रित प्रतियाँ, भारत सरकार द्वारा भूक डिपो, 8, किरण शंकर राय रोड, कलकत्ता में विक्रय हेतु यथासमय उपलब्ध होंगी। प्रत्येक विनिर्देश का मूल्य 2/- रु० है (यदि भारत के बाहर भेजे जाएं तो अतिरिक्त डाक खर्च)। मुद्रित विनिर्देश की आपूर्ति हेतु मांग पत्र के साथ निम्नलिखित सूची में यथाप्रदर्शित विनिर्देशों की संख्या सलग्न रहनी चाहिए।

रूपांकन (चित्र आरेखों) की फोटो प्रतियाँ, यदि कोई हों, के साथ विनिर्देशों की टंकित अथवा फोटो प्रतियों की आपूर्ति पेटेंट कार्यालय, कलकत्ता द्वारा विहित लिप्यान्तरण प्रमार जिसे उक्त कार्यालय से पत्र-व्यवहार द्वारा सुनिश्चित करने के उपरान्त उसकी अदायगी पर की जा सकती है। विनिर्देश की पुष्ट संख्या के साथ प्रत्येक स्वीकृत विनिर्देश के सामने नीचे वर्णित चित्र आरेख कागजों को जोड़कर उसे 4 से गुणा करके; (क्योंकि प्रत्येक पुष्ट का लिप्यान्तरण प्रमार 4/- रु० है) फोटो लिप्यान्तरण प्रमार का परिकलन किया जा सकता है।

Ind. Cl. : 13 A.  
Int. Cl.<sup>4</sup> : A 45 C 3/00.

168701

### AN IMPROVED GARMENT BAG.

Applicant : SAMSONITE CORPORATION, A CORPORATION ORGANISED AND EXISTING UNDER THE LAWS OF THE STATE OF COLORADO, U.S.A., OF 11200 EAST 45TH AVENUE, DENVER, COLORADO 80239, U. S. A.

Inventors : WILLIAM LEWIS KING & CHARLES KERNER WEISBART.

Application for Patent No. 936/Del/85, filed on 8th November, 1985.

Appropriate Office for Opposition Proceedings (Rule 4, Patents Rules, 1972), Patent Office Branch, New Delhi-110 005.

### 5 Claims

An improved garment bag adapted to fold into a suitcase-like configuration for travelling and having an interior space within which to pack garments, the interior space formed essentially by an exterior panel, a left and a right vertical side gusset, a top gusset, a bottom gusset, and an interior panel flexibly connected to the bottom gusset and removably connected to the top and side gussets, said garment bag further including means located within the interior space of the garment bag for supporting the middle portion of garments packed therein when the garment bag is folded into the suitcase-like configuration, characterised by garment holding means connected to the lower portion of the interior panel located at a surface of the lower portion of the interior panel facing the interior space for holding and supporting the lower portions of long garments in a folded U-shape configuration spaced above the bottom gusset of the bag when the interior panel is selectively connected to the side and top gussets.

Compl. Specn. 14 Pages.

Drgr. 2 Sheets.

Ind. Cl. : 32 F 2.b.  
Int. Cl.<sup>4</sup> : C07 D & 213/10.

168702

AN IMPROVED PROCESS FOR THE PRODUCTION OF ALPHA AND GAMMA PICOLINE THROUGH CATALYTIC VAPOUR PHASE CYCLODEHYDROGENATION REACTION OF ACETALDEHYDE AND AMMONIA.

Applicant : COUNCIL OF SCIENTIFIC & INDUSTRIAL RESEARCH, RAJ MARG, NEW DELHI-110001, INDIA AN INDIAN REGISTERED BODY INCORPORATED UNDER THE REGISTRATION OF SOCIETIES ACT (ACT XXI OF 1860).

Inventors : SHYAM KISHORE ROY, SISIR KUMAR ROY & PHANINDRA NATH MUKHERJEE.

Application for Patent No. 662/Del/86, filed on 23rd July, 1986.

Complete Specification left on 14th September, 1987.

Appropriate Office for Opposition Proceedings (Rule 4, Patents Rules, 1972), Patent Office Branch, New Delhi-110 005.

### 7 Claims

An improved process for the production of alpha and gamma picoline through the catalytic vapour phase cyclodehydrogenation reaction of acetaldehyde and ammonia which comprises heating ammonia vapour and acetaldehyde at a temperature in the range of 200—300°C in the presence of a catalyst selected from silica-alumina, silica-alumina promoted with oxides or fluorides of the metals such as herein described, pore regulated silica-alumina and ion exchange x and y-molecular sieves at a temperature in the range from 300—500°C and a space velocity varying from 350—900 reciprocal hrs and separating the alpha and gamma picolines by conventional methods.

Prov. Specn. 4 Pages.  
Compl. Specn. 10 Pages.

Drgr. Nil.

Ind. Cl.: 35 E.  
Int. Cl.<sup>4</sup>: C 04 B 35/66.

168703

26 Claims

**A PROCESS AND APPARATUS FOR DEPOSITING OR FORMING REFRACTORY MASSES ON THE SURFACE OF A SUBSTRATE.**

GLAVERBEL, A BELGIAN COMPANY, OF CHAUSSE DE LA HULPE, 166, B-1170 BRUSSELS, BELGIUM.

Inventors : LEON-PHILIPPE MOTTET & EMILIAN WLODARSKI.

Application for Patent No. 762/Del/86, filed on 25th August, 1986.

Convention date September 7, 1985/852225\*/U.K.

Appropriate Office for Opposition Proceedings (Rule 4, Patents Rules, 1972), Patent Office Branch, New Delhi-110 005.

13 Claims

A process for the production of a refractory mass useful in depositing or forming coatings on a surface of a substrate such as herein described which comprises spraying from the outlet of a lance and against that surface a mixture of oxidisable particles such as herein described and refractory particles such as herein described in a comburent carrier gas such as herein described so that on combustion of said oxidisable particles, sufficient heat is generated to soften or melt at least the surface of the refractory particles to bring about formation of the refractory mass, wherein said mixture of particles is itself mixed with a carrier gas stream and is fed along a line towards the lance outlet characterised in that oxygen is introduced into such feed line at least at one location therealong and at least 1 metre from the lance outlet and is mixed with the carrier gas/particle mixture during its flow towards the lance outlet, before reaching that outlet, thereby avoiding backflash and deposition of unburnt-oxidisable particles in the refractory mass formed.

Compl. Specn. 23 Pages.

Drgs. 2 Sheets.

Ind. Cl.: 181.  
Int. Cl.<sup>4</sup>: F 16 J 15/00.

168704

**CONTROLLABLE MECHANICAL SEAL FOR SEALING A SHAFT ROTATABLE RELATIVE TO THE HOUSING OF A FLUID MACHINE.**

Applicant : BW/IP INTERNATIONAL, INC. FORMERLY BORG-WARNER INDUSTRIAL PRODUCTS, INC., OF 200 OCEANGATE BLVD. LONG BEACH, CALIFORNIA 90802, U.S.A., A CORPORATION DULY ORGANISED AND EXISTING UNDER AND BY VIRTUE OF THE LAWS OF THE STATE OF DELAWARE, U.S.A.

Inventors : RICHARD F. SALANT, WILLIAM EDWARD KEY & PETER LAWRENCE KAY.

Application for Patent No. 859/Del/86, filed on 30th September, 1986.

Appropriate Office for Opposition Proceedings (Rule 4, Patents Rules, 1972), Patent Office Branch, New Delhi-110 005.

A controllable mechanical seal (18) for sealing a shaft (16) rotatable relative to the housing (12) of a fluid machine (10) said seal comprising a first face element (24) having a first radial face surface (34), said first element being adapted for rotation with the shaft (16), a second face element (30) having a second radial face surface (36), said second element being adapted to be supported within the housing, one of said elements being movable axially along the shaft, characterised in that said first and second surfaces are adapted to define a gap which converges from a high pressure side (20) to a low pressure side (22) of said seal and within which there is a thin lubricating fluid film, actuating means (32, 32a) for deforming at least one of said elements to thereby adjust the convergence of said surfaces (34, 36), sensing means (48) for generating a signal indicative of a condition of the gap (38), and control means (46) responsive to said signal for generating an output which is applied to said actuating means to control said deformation and thus maintain an optimum thickness of the lubricating film for a wide range of operating conditions.

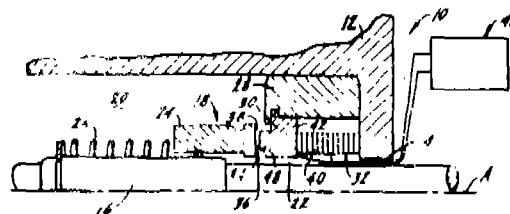


Fig. 1

Compl. Specn. 21 Pages.

Drgs. 2 Sheets.

Ind. Cl.: 107 IC. XVI (2).  
Int. Cl.<sup>4</sup>: F 02 M 27/04

168705

**MAGNETIC FLYWHEEL IGNITION UNIT FOR INTERNAL COMBUSTION ENGINES.**

Applicant : PIAGGIO & C.S.P., A COMPANY ORGANISED UNDER LAW OF THE ITALIAN REPUBLIC OF VIA A. CECCHI, 6-GENOVA, ITALY.

Inventor : GIACOMO MONTANO.

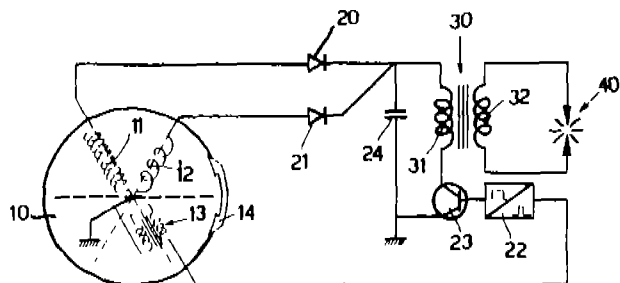
Application for Patent No. 7/Del/87, filed on 5th January, 1987.

Appropriate Office for Opposition Proceedings (Rule 4, Patents Rules, 1972), Patent Office Branch, New Delhi-110 005.

7 Claims

A magnetic-flywheel ignition unit for internal combustion engines comprising an ignition coil (30) having a primary winding, (31) capacitive means (24) connected to said primary winding (31) for feeding discharge current to said primary winding; (31) a rotatable magnetic flywheel (10) having high-impedance winding means, (11) low-impedance winding means (12) and magnetic pick-up means (13) said high-impedance winding means (11) being connected to said capacitive means (24) for charging said capacitive means (24) said high-impedance (11) and low-impedance (12) winding means being connected in parallel to each other and to said primary winding, (31) and said magnetic pick-up means being connected to said capacitive means (24) through electronic switch means to operate said electronic switch means (23, 22) (a) for controlling the charging

of said capacitive means (24) to substantially maximum voltage by said high-impedance winding means (11) and (b) for supplying low intensity current to drive the discharge of said capacitive means (24) on said primary winding (31) by said low-impedance winding means (12) to thereby prolong ignition discharge.



Compl. Specn. 12 Pages.

Dr. 1 Sheet.

Ind. Cl.: 32 B.

168706

Int. Cl.: C 07 C 2/00, 4/00.

### PROCESS FOR THE PRODUCTION OF XYLENE ISOMERS.

Applicant: UOP INC., A CORPORATION ORGANIZED UNDER THE LAWS OF THE STATE OF DELAWARE IN THE UNITED STATES OF AMERICA, WITH ITS PRINCIPAL OFFICE LOCATED AT TEN UOP PLAZA, ALGONQUIN & MT. PROSPECT ROADS, DES PLAINES, ILLINOIS 60016, U.S.A.

Inventor: ROBERT JAMES SCHMIDT.

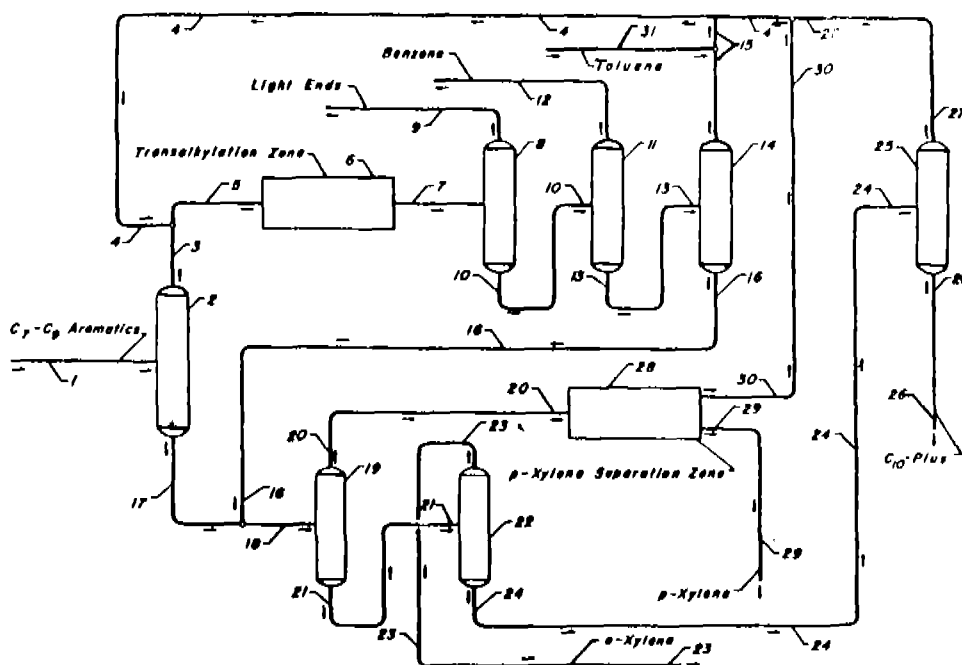
Application for Patent No. 55/Del/87, filed on 28th January, 1987.

Appropriate Office for Opposition Proceedings (Rule 4, Patents Rules, 1972), Patent Office Branch, New Delhi-110 005.

### 5 Claims

1. A process for the production of xylene isomer which comprises the steps of:

- passing a first feed stream comprising at least 35 mole percent toluene, a hereinafter characterized first process stream, which comprises at least one xylene isomer, and a hereinafter characterized recycle stream which comprises toluene into a catalytic isomerization/transalkylation zone which contains a noble metal-free catalyst and is operated at high severity conditions including a temperature of 426-498 degrees centigrade and producing an effluent stream which comprises benzene, toluene, xylenes, and C<sub>9</sub> aromatics;
- separating the effluent stream by fractional distillation in a fractional distillation zone and producing a benzene-rich process stream, a toluene-rich process stream, a xylene-rich process stream and a second process stream, which comprises C<sub>9</sub> aromatics;
- removing at least a portion of the benzene-rich process stream as a first product stream;
- returning at least a portion of the toluene-rich process stream to the isomerization/transalkylation zone as the previously referred to recycle stream;
- passing the xylene-rich process stream into a xylene separation zone and producing a second product stream, which comprises the desired xylene, and a separation zone raffinate stream, which comprises an undesired xylene isomer; and
- passing at least a portion of the raffinate stream into the isomerization/transalkylation zone as at least a portion of the first process stream.



Compl. Specn. 25 Pages.

Dr. 1 Sheet.



Ind. Cl. : 80-C.

168707

Int. Cl.<sup>4</sup> : B 01 D, 43/00, C 02 F & 1/00.

**PROCESS AND TUBULAR FILTER PRESS APPARATUS FOR DEWATERING A SLURRY TO FORM AN EASILY REMOVABLE CAKE FROM THE SOLIDS CONTENT OF SAID SLURRY.**

Applicant : THE WATER RESEARCH COMMISSION OF 710 VAN DER STEL BUILDING, 179 PRETORIUS STREET, PRETORIA, TRANSVAAL, SOUTH AFRICA, A LEGAL PERSONA ORGANISED ACCORDING TO THE LAWS OF THE REPUBLIC OF SOUTH AFRICA.

Inventors : KEVIN TREFFRY-GOATLY & CHRISTOPHER ANDREW BUCKLEY.

Application for Patent No. 68/Del/87, filed on 29th January, 1987.

Appropriate Office for Opposition Proceedings (Rule 4, Patents Rules, 1972), Patent Office Branch, New Delhi-110 005.

## 27 Claims

A process for dewatering a slurry with the formation as the resultant product of an easily removable cake composed of the solids content of said slurry which comprises :

filtering said slurry at a flow velocity of from 0.01 to 0.05 m/s and a pressure of from 50 to 1000 kPa through a cylindrical porous member whereby laminar flow conditions are maintained within said member and liquid in said slurry permeates outwardly resulting in the deposition as an annular layer of cake on the internal surface of said member of the solids in such slurry;

decreasing the pressure of slurry within the cylindrical member to between 10 and 100 kPa and increasing the flow velocity of slurry to said member to between 1 and 3 m/s when a predetermined thickness of cake has been deposited on the internal surface of said member;

dislodging in a manner as herein described the layer of cake formed of said internal member surface in the form of discrete particles;

conveying said dislodged discrete particles of cake downstream in said cylindrical member by means of the slurry flow; and

collecting said dislodged cake particles therefrom.

Compl. Specn. 18 Pages.

Drgs. 2 Sheets.

Ind. Cl. : 27 I &amp; 25 ABD.

168708

Int. Cl. : E E 04 C 1/00.

**AN IMPROVED INTERLOCKING BLOCK FOR A MORTARLESS WALL ASSEMBLY.**

Applicant & Inventor : JUAN HAENER, A U.S. CITIZEN OF 8215 HARTON PLACE, SAN DIEGO, CALIFORNIA 92123, UNITED STATES OF AMERICA.

2—G—77 GI/91

Application for Patent No. 80/Del/87, filed on 30th January, 1987.

Convention date November 10/1986/522597/8627027/Canada/U.K.

Appropriate Office for Opposition Proceedings (Rule 4, Patents Rules, 1972), Patent Office Branch, New Delhi-110 005.

## 21 Claims

An improved interlocking block for a mortarless wall assembly in which a plurality of such blocks are interlocked together to create a substantially continuous planar wall surface having a plurality of stacked linear courses of such blocks, the blocks in each course being interlocked in end to end relation, the blocks in a given one of said courses being in staggered relation to the blocks in the abutting courses in said stack, said blocks comprising :

- (a) a pair of spaced, parallel, upright sidewalls (24) having flat top (38) and bottom surfaces (40) said sidewalls having block-interlocking means on opposed ends thereof; and
- (b) at least one transverse upright support web (20) spanning said sidewalls and integral and making a cavity therewith, said web having a concavity disposed at the upper end of one of the opposite sides thereof and a complementary convexity disposed at the lower end of said one side, said convexity uniformly sloping upwardly into said concavity, whereby release of said block from a forming mold is facilitated and whereby said web has an increased surface area for improved adhesion to bonding material when poured into said cavity.

Compl. Specn. 19 Pages.

Drgs. 4 Sheets.

Ind. Cl. : 85 HQ.

168709

Int. Cl.<sup>4</sup> : F27B 7/20, 7/22, 7/24.

**ROTARY DRUM FOR USE WITH A ROTARY KILN.**

Applicant : HAZEMAG DR. E. ANDREAS GMBH & CO., OF ROSNERSTRASSE 6-8 POSTFACH 34 47, D-4400 MUNSTER, WEST GERMANY.

Inventor : KOSTRZEWA-KOCK IOTHAR.

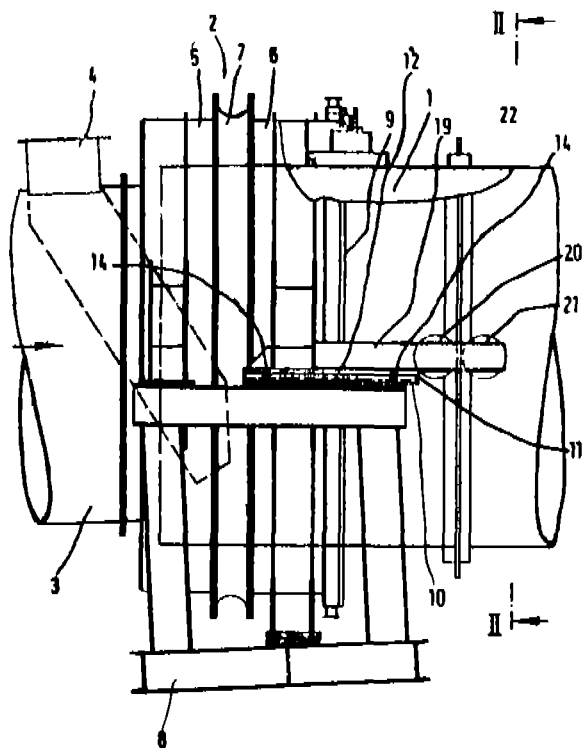
Application for Patent No. 90/Del/87, filed on 6th February, 1987.

Appropriate Office for Opposition Proceedings (Rule 4, Patents Rules, 1972), Patent Office Branch, New Delhi-5.

## 5 Claims

A rotary drum (1) for use with a rotary kiln comprising a circular flange (22) at one end, a fixed housing section (5) forming a circular enclosure around the other end of said rotary drum, an axially moveable housing section (6) connected to said fixed housing section (5), a sealing ring connected to said circular flange (22) for acting as a seal between said rotary drum (1) and said fixed housing section (5), an annular sealing surface on said axially moveable housing acting in conjunction with said sealing ring, a compensator connected between said fixed housing section and said axially moveable housing

section, characterised by brackets on both sides of said axially moveable housing section, said bracket being mounted on a supporting structure for permitting longitudinal and transverse movements of said axially moveable housing section with reference to the longitudinal axis of said rotating drum, and wherein the brackets are each mounted on the supporting structure by means of a slide piece said supporting structure being moveable in a transverse direction with reference to the brackets or to a slide piece attached thereto by means of a slot and key in a longitudinal direction with reference to the supporting structure or to a slide piece attached thereto.



Compl. Specn. 10 Pages.

Drgs. 2 Sheets.

Ind. Cl.: 55A.  
Int. Cl.: A61K 7/16.

168710

#### SOLID ANTITARTAR MOUTH DEODORANT COMPOSITION.

Applicant : COLGATE-PALMOLIVE COMPANY, OF 300 PARK AVENUE NEW YORK, 10022 UNITED STATES OF AMERICA, A CORPORATION ORGANISED UNDER THE LAWS OF THE STATE OF DELAWARE, U.S.A.

Inventors : JORDAN BARTH & LINDA JOY VELLEKOOP.

Application for Patent No. 153/Del/87, filed on 23rd February, 1987.

Appropriate Office for Opposition Proceedings (Rule 4, Patents Rules, 1972), Patent Office Branch, New Delhi-5.

15 Claims

A solid antitartar and mouth deodorant composition comprising a non-toxic zinc compound such as herein described which provides

zinc and a flavouring oil containing an ionone ketone terpene derivative, in a non-cariogenic carrier of the kind such as herein described the amount of said zinc being from 0.05 to 1% by wt. of said composition, the amount of said flavouring oil being from 0.1 to 2% by wt. of said composition and the balance being said non-cariogenic carrier.

Compl. Specn. 23 Pages.

Drg. Nil.

Ind. Cl.: 50 F + E - 3 VII (1).  
Int. Cl.: F 25 D - 11/00, 31/00.

168711

#### REFRIGERATOR-CUM-WATER COOLER.

Applicant & Inventor : RAVINDRAKUMAR RAMJIBHAI YADAV, SECTOR 19, 285/1/GH GANDHINAGAR (GUJARAT), INDIA.

Application No. 28/Bom/88, filed on 10th February, 1988.

Complete after prov. left on 9-3-1989.

Appropriate Office for Opposition Proceedings (Rule 4, Patents Rules, 1972), Patent Office Branch, Bombay-13.

2 Claims

Refrigerator-cum-water cooler having facility to draw water without opening the door in which cooling system is created comprising an arrangement (i) pipe arranged in zig-zag manner around or alongside or beneath the freezer box or (ii) a storage tank shaped as per quantity requirement of cold water and as per space available around the freezer box or (iii) zig-zag pipe arrangement (i) combined suitably with the arrangement of the storage tank (ii), having an end of inlet pipe attached to cooling system at upper level which fitted with filter outside the Refrigerator and connected with supply pipe of drinking water and the other end of outlet pipe attached at lower level so that what which will enter in the inlet at upper level will pass downward through the pipe or/and tank, which are happened to be very cool because of conventional phenomenon around the freezer box, getting cool while running through the entire system upto dispensing tap appended alongside the Refrigerator or alternatively extending the outlet end to a place outside refrigerator for drawing cold water.

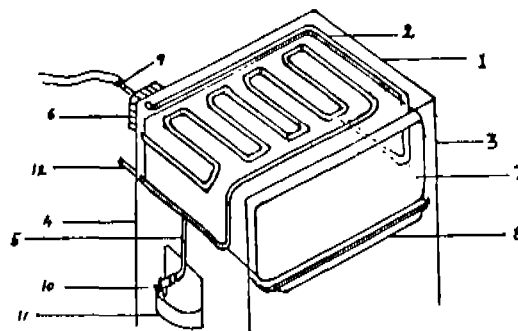


Fig. 1

Prov. Specn. 8 Pages.  
Compl. Specn. 12 Pages.

Drg. 1 Sheet.  
Drg. 1 Sheet.

Ind. Cl.: 107 G [XVI (2)].  
Int. Cl.: F 27 D —21/00.

168712

## ELECTRONIC ENGINE MONITOR.

Applicant & Inventor: BALCHANDRA KRISHNAJI PATWARDHAN, INDIAN, B-7, ABHIMANSHREE SOCIETY, PUNE-411 008, MAHARASHTRA, INDIA.

Application No. 8/Bom/89, filed on 3rd January, 1989.

Appropriate Office for Opposition Proceedings (Rule 4, Patents Rules, 1972), Patent Office Branch, Bombay-13.

## 4 Claims

Electronic engine monitor such as herein described comprising two modules coupled to each other by a cable terminal box and fitted within a casing characterised in that one of said modules comprises a frequency of voltage converter, a magnetic sensor, plurality of diaphragm type sensors, a temperature sensor, each of said sensors having a comparator with fixed or adjustable set point for adjusting various operating parameters for diesel engine connected to said monitor for sensing engine under/over speed RPM, low engine oil pressure low coolant pressure, 'blow-by' gas pressure generated within engine crank case and engine temperature, an enable circuit, a delay driver a relay driver, a trip switch with solenoid connected to fuel pump or decompression device of engine in known manner, and the other of said module comprising a buzzer and a flasher forming audio/visual alarm system, a ROM-cum-display driver connected to LED/LCD digital display a multi-step reset switch with or without a flasher introduced in said digital display circuit and respective comparators for displaying status of respective engine operations at the flick of said reset switch as illustrated so that on sensing by any of said sensors an engine fault condition in engine operation said audio/visual alarm and said flashers are triggered and within ten seconds of sensing any fault condition said trip switch trips the engine by actuating solenoid connected to said fuel pump or decompression device in known manner and the engine is restartable only on removing said fault condition and resetting said trip switch.

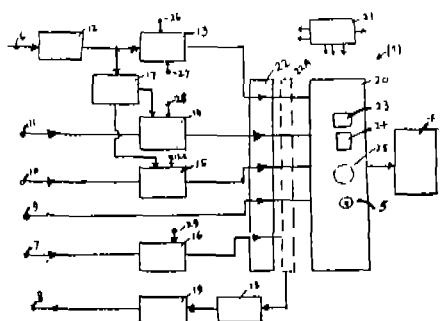


Fig. 3

Compl. Specn. 17 Pages.

Drgs. 2 Sheets.

Ind. Cl.: 126 D + A [LVIII (6)].  
Int. Cl.: G 01 M—3/16; F 16 P—3/14.

168713

## AN AUTOMATIC ELECTRONIC DEVICE FOR DETECTING L.P.G. LEAKAGE/FLAME FAILURE AND STOPPING THE GAS SUPPLY.

Applicant & Inventor: RAJENDRA SINGH CHAUHAN, 4-E/101, DAMODAR PARK, L. B. S. ROAD, GHATKOPAR (WEST), BOMBAY-400 086, MAHARASHTRA, INDIA.

Application No. 33/Bom/89, filed on 2nd February, 1989.

Appropriate Office for Opposition Proceedings (Rule 4, Patents Rules, 1972), Patent Office Branch, Bombay-13.

## 1 Claim

An automatic electronic device for detecting L. P. G. leakage/ flame failure and stopping the gas supply, comprising of a sensor (1) having a sensor chip (2) which has a electronic circuit (EC<sub>1</sub>) consisting of resistances R<sub>1</sub>, R<sub>2</sub> and R<sub>3</sub> and transistors T<sub>1</sub>, T<sub>2</sub> an electrical charge collection means such as a Tin-di-oxide plate (3), for collecting electrical charges from flowing/leakage gas molecules and triggering electronic circuit (EC<sub>1</sub>) to switch on D.C. power supply to the device through D.C. eliminator and/or from dry battery cell (e<sub>1</sub>) with the help of a pair of link mechanism (4) each of which comprises a diaphragm (5) a helical spring (6) and a link (7) the said sensor chip (2) being hinged to said diaphragm (5) with the help of a pair of lever (8); a second electronic circuit (EC<sub>2</sub>) comprising of at least one press switch (9) having three electrical contact points (P<sub>1</sub>), (P<sub>2</sub>) and (P<sub>3</sub>) connected to at least one magnetic relay (RL<sub>1</sub>) having electrical contact points (P<sub>4</sub>), (P<sub>5</sub>) and (P<sub>6</sub>) which is further connected to a audio alarm (B) and/or visual alarm (L<sub>1</sub>) through resistances (R<sub>4</sub>), (R<sub>5</sub>) and (R<sub>6</sub>) and diod (D<sub>1</sub>) for giving audio and/or visual alarm signals of gas leakage, when gas molecules are passing through the sensor chip (2) in the sensor (1), at third electronic circuit (EC<sub>3</sub>) comprising of at least one heat sensing switch (HS<sub>1</sub>) and/or light sensing switch (LS<sub>1</sub>) connected to electromagnet (EM<sub>1</sub>) of the magnetic relay (RL<sub>1</sub>) through resistances (R<sub>7</sub>), (R<sub>8</sub>), and (R<sub>9</sub>) transistors (T<sub>3</sub>) and (T<sub>4</sub>) and diod (D<sub>2</sub>) for stopping the audio-visual alarm signals and glowing a visual lamp (L<sub>2</sub>) connected to (P<sub>6</sub>) of said magnetic relay (RL<sub>1</sub>) through a resistance (R<sub>10</sub>) indicating the ignition of flame at burner; an automatic gas supply stopping mechanism (10) comprising of an electromagnet (EM<sub>2</sub>), pin (11), lever (12), a plate (13), a spring (14), a shaft (15) a knob holding fork (16) and a shaft knob (17), provided inside a cover (18) fixed at the neck of the L.P.G. cylinder (GC), the said electromagnet (EM<sub>2</sub>) connected to said audio-visual alarm through electronic timer (ET) for automatically stopping the gas supply, in case gas leakage alarm continues for a predetermined time; a pressure sensor (PS) provided in side of the said cover (18) comprising of a diaphragm (19) and a Press switch (20) (known type) connected to the said audio alarm (B) and/or visual alarm (L<sub>1</sub>) through resistances R<sub>4</sub>, R<sub>5</sub> and R<sub>6</sub> D.C. power is supplied through another dry battery cells (e<sub>2</sub>) for indicating the gas leakage from L.P.G. cylinder (GC) and regulator (Rg) joint.

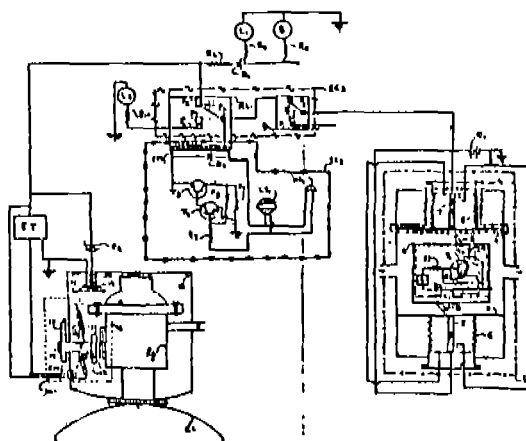


Fig. 1

Compl. Specn. 10 Pages.

Drg. 1 Sheet.

Ind. Cl.: 170 B + D [XIII (4)].  
Int. Cl.: C 11 D—1/00, 3/00, 17/08.

168714

### LIQUID DETERGENT COMPOSITION.

Applicant: HINDUSTAN LEVER LIMITED, HINDUSTAN LEVER HOUSE, 165/166, BACKBAY RECLAMATION, BOMBAY-20, MAHARASHTRA, INDIA.

Inventor: DAVID ALAN REED.

Application No. 70/Bom/89, filed on 20th March, 1989.

[U. K. Priority 21-3-1988; 11-10-1988].

Appropriate Office for Opposition Proceedings (Rule 4, Patents Rules, 1972), Patent Office Branch, Bombay-13.

17 Claims

Apourable, homogeneous, abrasive, aqueous detergent composition comprising, in addition to water:

- (i) detergent active such as herein described,
- (ii) water soluble salt, at least part of which is potassium sulphate present in both a dissolved and an undissolved state, the undissolved part of the potassium sulphate having a mean particle diameter of from 10—500  $\mu\text{m}$ ;

the composition having a pH of less than 8, and having an apparent viscosity at 20°C of at least 6500 pas at a shear rate of  $3 \times 10^5 \text{ sec}^{-1}$ , and not more than 10 pas at a shear rate of  $21 \text{ sec}^{-1}$ .

Compl. Specn. 2 Pages.

Drg. Nil.

Ind. Cl.: 28 F [XXX (1)], 180—[XV (2)].  
Int. Cl.: F 24 C—5/10.

168715

### AN IMPROVED STOVE.

Applicant & Inventor: HIRALAL LAXMICHAND PAREKH, INDIAN OF H. L. BROTHERS, MANDVI CHOWK, RAJKOT, GUJARAT, INDIA.

Application No. 108/Bom/89, filed on 24th April, 1989.

Appropriate Office for Opposition Proceedings (Rule 4, Patents Rules, 1972), Patent Office Branch, Bombay-13.

3 Claims

An improved stove which includes:

a burner assembly consisting a pair of inlet nozzles in communication with a pair of outlet nozzles and defining therebetween a pair of passages;

one of said inlet nozzles being secured to a fuel chamber and the other being secured to an air chamber, both said fuel and air chambers located remotely from said burner assembly;

one of said outlet nozzles provided to vertically eject the jet of air and the other provided to horizontally eject the jet of fuel and are arranged in such a manner that the vertically and horizontally ejecting jets impinge one another, so that the fuel jet is atomized to get ignited to produce flame, and

valve means to regulate flow of said jets of air and fuel to generate flame in a regulated manner.

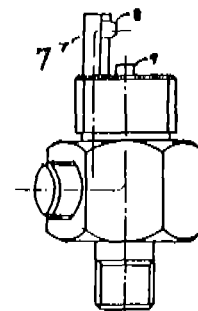


Fig. 6

Compl. Specn. 11 Pages.

Drgs. 2 Sheets.

Ind. Cl.: 157 D-6(b) [L].  
Int. Cl.: E01B—23/04, 3/16, 9/22

168716

### STEEL TRACK-LINE-SLEEPER FOR MINE TROLLEYS.

Applicant & Inventor: JITENDRA KUMAR KAPOOR, C/O. KRISHI VIKAS KENDRA, BETUL GANJ, BETUL-460 002, (M.P.), INDIA.

Application No. 141/Bom/89, filed on 31st May, 1989.

Appropriate Office for Opposition Proceedings (Rule 4, Patents Rules, 1972), Patent Office Branch, Bombay-13.

3 Claims

Steel track-line-sleeper for mine trolleys comprising an elongate base channel formed by rolling or pressing having rounded outer corners formed at junction of web and flanges thereof, said base channel provided with a pair of outer track-holding-brackets immovably fixed over web of said base channel and interspaced corresponding to interspacing of said track lines, another pair of inner track-line-clamping rotatable-brackets rotatably attached to said base channel by rivet or fastener means, raised free ends of said outer track holding brackets and inner track-clamping-rotatable brackets facing each other forming therebetween grooves adapted to accommodate and clamp therein base flange of said track line, each of said inner track-line-clamping-rotatable brackets having rear extending portion opposite to said raised free end provided with a cross through hole corresponding to a cross through hole provided in said base channel receiving a lock pin therethrough for preventing rotation of said inner track-clamping-rotatable-bracket after said track line has been installed.

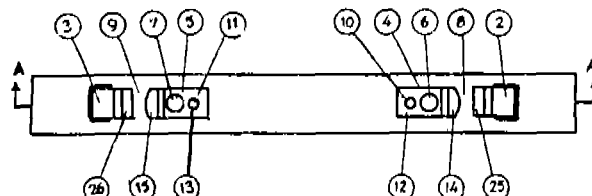


Fig. 1

Compl. Specn. 10 Pages.

Drgs. 2 Sheets.

Ind. Cl. : 55 E<sub>4</sub> [XIX (1)]; 32 F<sub>2</sub>(b) [IX (1)].  
Int. Cl. : C 12 P 35/00, 35/02.

168717

A PROCESS FOR THE PRODUCTION OF 7-AMINO-  
DESACETOXY CEPHALOSPORANIC ACID.

Applicant : HINDUSTAN ANTIBIOTICS LTD., PIMPRI,  
PUNE-411 108, MAHARASHTRA, INDIA.

Inventors : (1) JAIPRAKASH G. SHEWALE, (2) VAYALOM-  
BRON K. SUDHAKARAN, (3) BHAGVANT S. DESHPANDE, (4)  
SUDHA S. AMBEDKAR AND (5) DR. SURESH R. NAIK.

Application No. 146/Bom/89, filed on 7th June, 1989.

Appropriate Office for Opposition Proceedings (Rule 4, Patents  
Rules, 1972), Patent Office Branch, Bombay-13.

## 2 Claims

A process for the production of 7-ADCA which comprises sus-  
pending the immobilized penicillin G acylase in 0.05 M phosphate  
buffer at a pH in the range of 7.6 to 7.8, adding to the suspension  
cephalosporanic acid G solution, adjusting the pH between 7.6 to 8.0  
by neutralization of liberated phenylacetic acid with 3.0 N ammonia  
solution, separating by filtering the immobilized penicillin G acylase  
and processing the filtrate by isoelectric pH precipitation for isola-  
tion of 7-ADCA, as herein described.

Compl. Specn. 9 Pages.

Drg. 1 Sheet.

Ind. Cl. : 90 C, J, I [XXXVI], 25 A, D, [XXV (1)].  
Int. Cl. : E 04 D—3/28, 13/03.

168718

A REINFORCED RIBBED GLASS FOR SKYLIGHT OPEN-  
ING AND THE LIKE.

Applicant : SHIRISH BHAILAL PATEL, NANDA DEEP, 2-A  
M. L. DAHANUKAR MARG, BOMBAY-400 026.

Application No. 232/Bom/89, filed on 18th August, 1989.

Appropriate Office for Opposition Proceedings (Rule 4, Patents  
Rules, 1972), Patent Office Branch, Bombay-13.

## 5 Claims

(1) A reinforced ribbed glass for skylight openings and the like  
comprising a glass plate/sheet having ribbing at least on its one sur-  
face for uniformly scattering/diffusing the sun rays passing there-  
through and provided with wire reinforcement embedded therein.

Compl. Specn. 5 Pages.

Drg. 1 Sheet.

Ind. Cl. : 170 B—XLIII(4).  
Int. Cl. : C 11 D—7/16.

168719

METHOD OF MAKING TOILET SOAP BARS.

Applicant : HINDUSTAN LEVER LIMITED, HINDUSTAN  
LEVER HOUSE, 165/166, BACKBAY RECLAMATION,  
BOMBAY-400 020, MAHARASHTRA, INDIA.

Inventors : (1) JOHN GEORGE CHAMBERS, (2) DR. CAR-  
OLINE SUSAN CORDERY, (3) MR. NORMAN HALL, (4) MR.  
MICHAEL HOOD & (5) MR. GEOFFREY IRLAM.

Application No. 271/Bom/89, filed on 6th October, 1989.

Convention priority date October 7, 1988.

Appropriate Office for Opposition Proceedings (Rule 4, Patents  
Rules, 1972), Patent Office Branch, Bombay-13.

## 10 Claims

Method of making toilet soap bars comprising mixing tetra-  
sodiumpyrophosphate with moisture-containing soap, thereafter  
drying the mixture and shaping the mixture into bars, the amounts of  
soap and tetrasodiumpyrophosphate, and the extent of drying, being  
arranged so as to form toilet soap bars comprising :

40 to 89% by weight soap (reckoned as anhydrous),

1 to 33% by weight tetrasodiumpyrophosphate (reckoned  
as anhydrous Na<sub>4</sub>P<sub>2</sub>O<sub>7</sub>), and

(x + 4)% to (X + -9)% by weight water, where x% is the  
calculated amount of water required to effect complete hydra-  
tion of the pyrophosphate to its decahydrate.

Compl. Specn. 17 Pages.

Drg. Nil.

Ind. Cl. : 32 F<sub>3</sub> (d) [IX (1)], 55 E<sub>4</sub> [XIX (1)].  
Int. Cl. : C 07 D—311/00, 311/02.

168720

A PROCESS FOR THE PREPARATION OF NOVEL PHAR-  
MACOLOGICALLY ACTIVE 2-HYDROXY ACETOXY SUB-  
STITUTED POLYOXYGENATED LABDANE DERIVATIVES.

Applicants : HOECHST INDIA LIMITED, NARIMAN  
POINT, 193 BACKBAY RECLAMATION, BOMBAY-400 020,  
MAHARASHTRA, INDIA.

Inventors : 1. DR. BANSI LAL, 2. ASHOK GANGOPADHYAY,  
3. VIJAY ATMARAM AROSKAR, 4. DR. ALIHUSSEIN NOMAN-  
BHAI DOHADWALLA, AND 5. DR. RICHARD HELMUT  
RUPP.

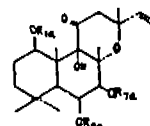
Application No. 294/Bom/89, filed on 1st November, 1989.

Divisional of 50/Bom/87.

Appropriate Office for Opposition Proceedings (Rule 4, Patents  
Rules, 1972), Patent Office Branch, Bombay-13.

## 2 Claims

1. A process for the preparation of novel pharmacologically  
active 2-hydroxyacetoxy substituted polyoxygenated labdane deri-  
vatives of the formula IA shown in the accompanying drawings,  
wherein R<sub>1a</sub>, R<sub>6a</sub> and R<sub>7a</sub> are hydrogen, acetyl or 2-hydroxyacetoxy  
with the

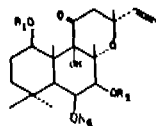


Formula IA

proviso that  $R_{1a}$ ,  $R_{6a}$  and  $R_{7a}$  are not simultaneously hydrogen, said process comprises treating a compound of the formula I shown in the accompanying drawings wherein  $R_1$  is hydrogen or a group of the formula  $-C(=O)(CH_2)_n-CH_2-OR_a$ , wherein  $n$  stands for 0 or 1,  $R_a$

$O R_a$

stands for hydrogen, alkyl acyl aralkyl or aryl and  $R_b$  stands for hydrogen, hydroxyl, alkyl or aryl,  $R_a$  and  $R_b$  together with the oxygen and carbon atoms to which they are attached are represented by the group shown in Fig. 1 of the accompanying drawings, and  $R_6$  and  $R_7$  each is hydrogen, acetyl or a



Formula I

group of the formula  $-C(=O)(CH_2)_n-CH_2-OR_a$ , wherein  $n$ ,  $R_a$  and  $R_b$

$O R_a$

have the same meaning as described above with the proviso that  $R_1$ ,  $R_6$  and  $R_7$  are not simultaneously hydrogen, with 2, 3-dichloro-5, 6-dicyano-1, 4-benzoquinone (DDQ) in an organic solvent such as methylene chloride or dichloromethane at ambient temperature and isolating and purifying the compound of the formula 1A from the reaction in a known manner such as herein described.

Compl. Specn. 10 Pages.

Drg. 1 Sheet.

Ind. Cl.: 32 C, 55 F.  
Int. Cl.: C12 N, 15/00.

168721

#### A METHOD OF PRODUCING HYBRID FRAGMENTS OF GENOMIC DNA HYBRIDISED TO A PROBE FOR USE AS A DIAGNOSTIC MATERIAL.

Applicant: IMPERIAL CHEMICAL INDUSTRIES PLC., A BRITISH COMPANY OF IMPERIAL CHEMICAL HOUSE, MILLBANK, LONDON SW1P 3 JF, ENGLAND.

Inventor: ALEC JOHN JEFFREYS.

Application for Patent No. 226/Del/87, filed on 18th March, 1987.

Convention date March 19th, 1986/8606719/U.K.

Appropriate Office for Opposition Proceedings (Rule 4, Patents Rules, 1972), Patent Office Branch, New Delhi-5.

5 Claims

1. A method of producing hybrid fragments of genomic DNA hybridised to a probe for use as a diagnostic material said hybrid fragments being characteristic of a sample of genomic DNA which method comprises contacting DNA fragments obtained by fragmenting sample DNA with one or more restriction enzymes of the kind such as herein described which do not cleave to any relevant extent a sequence corresponding to a tandem repeat, with a single locus polynucleotide probe comprising a nucleotide sequence which is specific as to a single minisatellite region or hypervariable locus and which is homologous therewith to a degree enabling hybridisation of the nucleotide sequence to a corresponding DNA fragment

containing a minisatellite from said single minisatellite or hypervariable locus and wherein said minisatellite region or hypervariable locus has a degree of polymorphism of at least 3 or said region or locus has an allelic variation of at least 3(100) and said region or locus is detectable by a multilocus polynucleotide probe which is capable of differentiating DNA by reference to more than one polymorphic minisatellite region or hypervariable locus.

Compl. Specn. 59 Pages.

Drgs. 13 Sheets.

Ind. Cl.: 39 P LXIV (2) & 70C, LVIII (5).  
Int. Cl.: C01G 9/06.

168722

#### A METHOD FOR THE PURIFICATION OF ZINC SULFATE ELECTROLYTE.

Applicant: COMINCO LTD., A CORPORATION CONSTITUTED UNDER THE LAWS OF CANADA, OF 2600-200 GRANVILLE ST., VANCOUVER, BRITISH COLUMBIA V6C 2R2, CANADA.

Inventors: DONALD LORNE BALL & DANIEL AKUAMOAHE DAMEH BOATENG.

Application for the Patent No. 250/Del/87, filed on 23rd March, 1987.

Convention date April 22nd 1986/507254/Canada.

Appropriate Office for Opposition Proceedings (Rule 4, Patents Rules, 1972), Patent Office Branch, New Delhi-5.

9 Claims

A method for the purification of zinc sulfate electrolyte said method comprising subjecting a zinc sulfate electrolyte containing concentrations of monovalent cations including at least one cation chosen from the group consisting of thallium, sodium and potassium and monovalent anions including at least one anion chosen from the group consisting of chloride and fluoride to electrodialysis in an electrodialysis unit comprising a multiplicity of alternating monovalent cation permselective exchange membranes and monovalent anion permselective exchange membranes, said membranes defining alternating dilute and concentrate cells, an anode compartment and a cathode compartment, an anode positioned in the anode compartment and a cathode positioned in the cathode compartment, rinsing said anode compartment and said cathode compartment with circulating rinse solutions wherein the electrical current applied between the anode and the cathode is such that the corresponding current density is in the range of from 10 to 500 A/m<sup>2</sup>, the temperature in the unit is in the range of from 0 to 60°C, the PH of the feeding electrolyte is less than about 5.5, and the linear velocity of the flowing solution through the unit is sufficient to maintain turbulent flow.

Compl. Specn. 24 Pages.

Drg. Nil.

Ind. Cl.: 206E.  
Int. Cl.: G06 F 3/14.

168723

#### VIDEO DISPLAY APPARATUS.

Applicant: APPLE COMPUTER, INC., A CORPORATION ORGANISED UNDER THE LAWS OF THE STATE OF CALIFORNIA, UNITED STATES OF AMERICA, OF 20525 MARIANI AVENUE, CUPERTINO, CALIFORNIA 95014, UNITED STATES OF AMERICA.

Inventor: STEPHEN GEOFFREY PERLMAN.

9 Claims

Application for Patent No. 291/Del/87, filed on 6th April, 1987.

Appropriate Office for Opposition Proceedings (Rule 4, Patents Rules, 1972), Patent Office Branch, New Delhi-5.

10 Claims

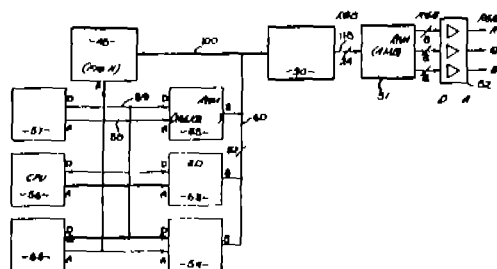
A video display apparatus comprising:

a bus;

a semi-conductor memory (35) as herein described for storing data representative of a plurality of objects (40) for (42) display;

a buffer as herein described (50) for composing a line of pixel data for all of said objects which intersect a line of said display before composing another line of pixel data for said display, said buffer (50) being coupled to said semi-conductor (35) memory along said bus;

a despatcher (48) as herein described connected to said buffer (50) and said semi-conductor (35) memory for controlling accessing of said data in said memory (35) such that one line of data for each of said objects is read into said buffer (50) to permit said composing of said line of pixel data for said display; said buffer (50) for each pixel of said pixel data also storing additional data representing the type of pixel data composed in said buffer (50); whereby pixel data of different types can be readily composed for display.



Compl. Specn. 55 Pages.

Drgs. 15 Sheets.

Ind. Cl.: 173 B XXIX (2).  
Int. Cl.: B 05 B 5/02.

168724

#### ELECTROSTATIC SPRAYING APPARATUS.

Applicants: IMPERIAL CHEMICAL INDUSTRIES PLC., A BRITISH COMPANY, OF IMPERIAL CHEMICAL HOUSE, MILLBANK, LONDON SW1P 3 JF, ENGLAND.

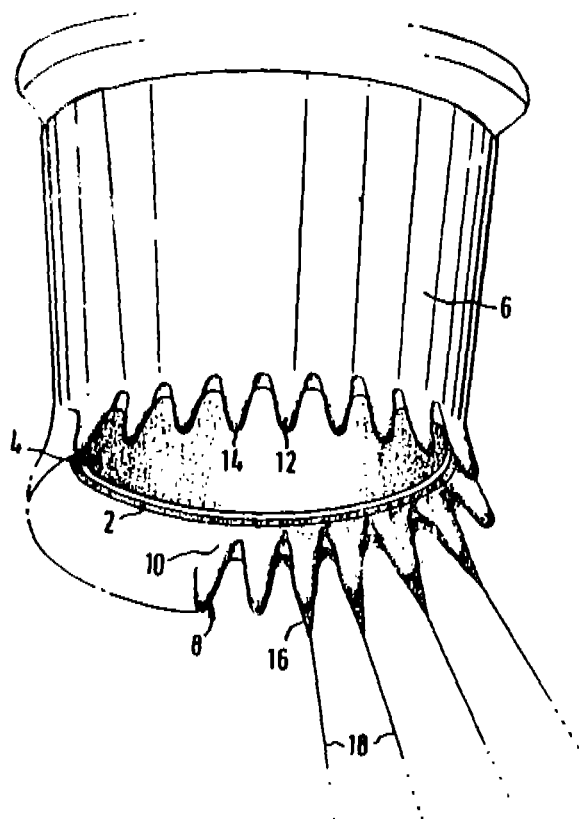
Inventors: RONALD ALAN COFFEE, TIMOTHY JAMES NOAKES, STEPHEN JAMES BANCROFT.

Application for the Patent No. 301/Del/87, filed on 9th April, 1987.

Convention date April 21/86/8609703/U.K.

Appropriate Office for Opposition Proceedings (Rule 4, Patents Rules, 1972), Patent Office Branch, New Delhi-5.

Electrostatic spraying apparatus, comprising: a nozzle connected to a high voltage supply means (9), said nozzle having an electrically conducting or semi-conducting liquid contacting surface (10) and having means (22) for delivering liquid over said surface (10) to a spraying edge (8) the high voltage supply means (9) charging the surface (10) to a high potential, characterised in that said spraying edge has a plurality of tips (14) at said high potential, between said tips (14) the local electric field strength being relatively less intense so that the liquid is drawn out from the tips (14) by electrostatic forces into ligaments (18) which break up into electrically charged particles; the nozzle being positioned in said apparatus so that the electric field strength is substantially independent of any low potential influences from the apparatus.



Compl. Specn. 17 Pages.

Drgs. 4 Sheets.

Ind. Cl.: 101 B XXVII (2).  
Int. Cl.: B01D—5/40, 5/00, 29/00, 29/06.

168725

#### APPARATUS FOR UNDERWATER DRILLING OF FOUNDATIONS.

Applicant: SOLETANCHE, A FRENCH COMPANY, OF 6, RUE DE WATFORD, 92005 NANTERRE, FRANCE.

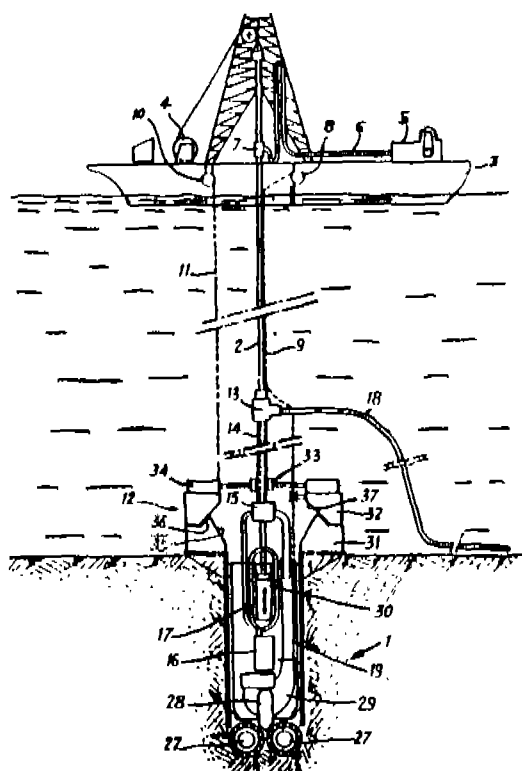
Inventors: BARTHELEMY HERVE, BOLLINGER KARL, BROCHIER MICHEL, GAU MAURICE & LEGENDER YVES.

Application for Patent No. 374/Del/87, filed on 29th April, 1987.

Appropriate Office for Opposition Proceedings (Rule 4, Patents Rules, 1972), Patent Office Branch, New Delhi-5.

#### 7 Claims

Apparatus for underwater drilling of foundation, said apparatus comprising at least one cutter (27), a pump for discharge of excavated material and hydraulic motors for driving said cutter and said pump, characterised by a hydraulic turbine (16) operable by a fluid such as sea water being drivingly connected to a hydraulic drive means (23, 24) for providing drive to said hydraulic motors connected thereto, a head in the form of a first distribution box (15) connected to said hydraulic turbine (16) for providing fluid feed thereto and for discharge of excavated material, said first distribution box (16) being connected by a two-line pipe (14) to a second distribution box (13), said two-line pipe (14) having one of its lines connected to feed means (2) for providing fluid feed to said hydraulic turbine (16), other line of said two-line pipe (14) being connected to a hose (18) for evacuation of excavated material.



Compl. Specn. 11 Pages.

Drgs. 2 Sheets.

Ind. Cl. : 144A.  
Int. Cl.<sup>4</sup> : C23C 4/04 & 4/08.

168726

#### A METHOD FOR COATING A SUBSTRATE.

Applicant : UNION CARBIDE CORPORATION, A CORPORATION ORGANISED UNDER THE LAWS OF THE STATE OF NEW YORK, LOCATED AT OLD RIDGEBURY ROAD, DANBURY, STATE OF CONNECTICUT 06817, UNITED STATES OF AMERICA, MANUFACTURERS.

Inventors : CALVIN HENRY LONDRY & THOMAS ALLEN ADLER.

Application for Patent No. 607/Del/87, filed on 16th July, 1987.

Divisional to Application No. 833/Del/84, filed on 27th October, 1984.

Ante-dated to 27th October, 1984.

Appropriate Office for Opposition Proceedings (Rule 4, Patents Rules, 1972), Patent Office Branch, New Delhi-5.

#### 7 Claims

A method of coating a substrate such as herein described to produce a coating having increased strength and wear resistance, said method comprising suspending a powdered coating material comprising cobalt, chromium, carbon and tungsten in a high temperature, high velocity gaseous stream of the kind such as herein described thereby heating to a temperature at least close to the melting point thereof, said gaseous stream being directed against a surface of said substrate to deposit a coating thereon wherein said coating consists essentially of from 4.0 to 10.5 weight percent cobalt, from 5.0 to 11.5 weight percent chromium, from 3.0 to 5.0 weight percent carbon and the balance tungsten.

Compl. Specn. 24 Pages.

Drg. Nil.

Ind. Cl. : 32 E.  
Int. Cl.<sup>4</sup> : C 08 F 236/06 8/00.

168727

#### A PROCESS FOR THE PREPARATION OF MODIFIED STYRENE BUTADIENE STYRENE BLOCK COPOLYMERS.

Applicant : SHRI RAM INSTITUTE FOR INDUSTRIAL RESEARCH, 19, UNIVERSITY ROAD, DELHI-110007, INDIA, AN INDIAN INSTITUTE REGISTERED UNDER SOCIETIES ACT.

Inventors : GULZARI LAL BHALLA, RAKESH CHANDRA SOOD.

Application for the Patent No. 707/Del/87, filed on 14th August, 1987.

Appropriate Office for Opposition Proceedings (Rule 4, Patents Rules, 1972), Patent Office Branch, New Delhi-5.

#### 7 Claims

A process for the preparation of modified styrene butadiene styrene block copolymers which comprises in preparing a solution of said copolymer or precursor thereof in a reaction vessel having a solvent adding a catalyst consisting of activated palladium charcoal, closing said vessel, removing oxygen from said vessel and then adding hydrogen gas thereto for hydrogenation so as to saturate butadiene unsaturated portion of said copolymer, characterised in that said solvent being an aromatic solvent such as toluene or xylene.

Compl. Specn. 7 Pages.

Drg. Nil.



Ind. Cl.: 55. E4.  
Int. Cl.: A 61K 35/78.

168728

AN IMPROVED PROCESS FOR THE PRODUCTION OF COLEONOL FROM THE ROOTS OF THE PLANT COLEUS FORSKOHLIT BRIG (SYN. C. BARBATUS).

Applicant: COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH, RAFI MARG, NEW DELHI-110001, INDIA, AN INDIAN REGISTERED BODY INCORPORATED UNDER THE REGISTRATION OF SOCIETIES ACT (ACT XXI OF 1860).

Inventors: JAI SHANKER TANDON, SUNIL KRISHNA CHATTERJI, ANIL KUMAR SRIVASTAVA, HIRA LAL SHARMA, SHEKHAR CHANDRA SHARMA & NEERAJ VERMA.

Application for Patent No. 1154/Del/87, filed on 31st December, 1987.

Complete Specification left on 10th February, 1989.

Appropriate Office for Opposition Proceedings (Rule 4, Patents Rules, 1972), Patent Office Branch, New Delhi-5.

## 3 Claims

An improved process for the production of coleonol from the roots of the plant *Coleus Forskohlii* Brig (Syn. *C. Barbatus*) which comprises grinding the root to form a powder, extracting coleonol from the powdered root by solvent extraction using dichloroethane, recovering the solvent dichloroethane by distillation, using the recovered solvent to extract additional fresh powder evaporating the dichloroethane, chromatographing the residue on silica gel, then eluting it using dichloroethane as the eluent, recovering the solvent, and if required, and reusing the recovered solvent for the extraction of further fresh powder of the root, and/or in the chromatographic step, crystallising the crude coleonol from dichloroethane.

Prov. Specn. 7 Pages.  
Compl. Specn. 8 Pages.

Drgs. 3 Sheets.

Ind. Cl.: 55E4.  
Int. Cl.: C 07 C 37/01.

168729

AN IMPROVED PROCESS FOR THE PREPARATION OF NOJIRIMYCIN (5-DEOXY-5-IMINO- $\alpha$ -D-GLUCITOL) AND ITS ANALOGUES (5-DEOXY-5-IMINO SUGAR ALDITOLS).

Applicant: COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH, RAFI MARG, NEW DELHI-110001, INDIA, AN INDIAN REGISTERED BODY INCORPORATED UNDER THE REGISTRATION OF SOCIETIES ACT, (ACT XXI OF 1860).

Inventors: BANDARU RAJANIKANTH & RAMACHANDRAN SESHADARI.

Application for Patent No. 534/Del/88, filed on 21st June, 1988.

3—G—77 GI/91

Appropriate Office for Opposition Proceedings (Rule 4, Patents Rules, 1972), Patent Office Branch, New Delhi-5.

## 5 Claims

An improved process for the preparation of nojirimycin (5-deoxy-5-imino- $\alpha$ -D-glucitol) and its analogues (5-deoxy-5-imino sugar alditols) which comprises treating a sugar lactone such as herein described with ammonia under continuous stirring and at ice cold conditions to yield the corresponding amino acid, *in situ* cyclisation of the said amino acid in an acidic conditions such as herein described to yield the corresponding lactam, reducing the lactam formed using sodiumborohydride at a pH between 8 and 9.

Compl. Specn. 9 Pages.

Drg. 1 Sheet.

Ind. Cl.: 182-A.  
Int. Cl.: C 13 J 1/06.

168730

PROCESS FOR PRODUCING LIQUID SUGAR FROM OPEN PAN SUGAR MOLASSES.

Applicant: APPROPRIATE TECHNOLOGY DEVELOPMENT ASSOCIATION OF POST BOX NO. 311, GANDHI BHAWAN, LUCKNOW-226001, U.P. INDIA, AN ASSOCIATION REGISTERED UNDER THE REGISTRATION OF SOCIETIES ACT, 1860.

Inventors: MOHAMMAD MANSURUL HODA & VINOD KUMAR SHARMA.

Application for Patent No. 1118/Del/88, filed on 19th December, 1988.

Complete Specification left on 22nd August, 1989.

Appropriate Office for Opposition Proceedings (Rule 4, Patents Rules, 1972), Patent Office Branch, New Delhi-5.

## 9 Claims

A process for producing non-crystalline liquid sugar from 'B' grade molasses obtained from the open pan process for the manufacture of khandsari sugar comprising diluting the said molasses with water and then stirring to dissolve the molasses completely, adding Phosphoric acid to the molasses solution to reduce its pH between 2-3, thereafter adding milk of lime to neutralise the solution, passing the molasses solution through an Ion-exchange assembly comprising at least two columns, one column containing a strongly acidic Cation exchange resin in sodium/hydrogen form having 'gel polystyrene' polymer structure, 'sulphonic' functional group and pH range between 0 to 14 and the second column containing a weakly basic anion exchange resin having 'macroporous polystyrene' polymer structure, 'tertiary amine' functional group and pH range between 0 to 9 whereby the sugar gets separated from the molasses and boiling the dilute sugar solution obtained to produce liquid sugar of about 60°—70° Brix.

Prov. Specn. 3 Pages.  
Compl. Specn. 8 Pages.

Drg. 1 Sheet.

CLASS : 123.  
Int. Cl. : C 05 d 11/00.

168731

5 Claims

# A PROCESS FOR THE MANUFACTURE OF A BALANCED GRADE CHLORINE FREE N-P-K FERTILIZER

Applicant : PROJECTS & DEVELOPMENT INDIA LIMITED,  
OF P.O. SINDRI, DHANBAD, BIHAR, INDIA.

Inventors : (1) DR. RAM CHANDRA YADAV, (2) DR. ALAKH  
DHARI PANDEY, (3) DR. KRISHNA MOHAN VERMA.

Application No. 913/Cal/86, filed on 16th December, 1986.

Appropriate Office for Opposition Proceedings (Rule 4, Patents  
Rules, 1972), Patent Office, Calcutta.

## 16 Claims

A process for the manufacture of highly concentrated balanced grade high stable chlorine free N-P-K fertilizer from standard rock phosphate which comprises subjecting the rock phosphate to digestion with concentrated nitric acid of 58 to 65% strength to obtain acidulate slurry in which all the nitrogen and phosphate values as well as calcium values are in the soluble form, followed by allowing the slurry to settle so as to settle the insoluble material which is primarily the insolubles contained in the rock phosphate such as silica or quartz,  $R_2O_3$  fluorine etc., removing the insolubles in a known manner and thereafter chilling the substantially clear solution to temperature of the order of 8 to 12°C so as to obtain a controlled crystallization of the calcium values as calcium nitrate removing crystallized material by filtration in cold conditions where after the crystallized material is subjected to washing with a solution having nitrate ions so as to obtain substantially  $P_2O_5$  free calcium nitrate crystals, the wash liquor being reused elsewhere in the process, acidulated solution containing the remaining calcium values substantially all the nitrogen and potassium values being then subjected to reaction with potassium sulphate so as to convert the balance calcium values into calcium sulphate which is filtered and removed to give a clear solution of substantially free calcium values and any incidental fluorine or silica values the said clear solution being then subjected to concentration and converted into granules or prills in a conventional manner.

Compl. Specn. 17 Pages.

Drg. Nil.

CLASS : 139-C.  
Int. Cl. : C 01 b 7/01.

168732

# PRODUCTION PROCESS OF CHLORINE.

Applicant : MITSUI TOATSU CHEMICALS, INCORPORATED,  
OF 2-5, KASUMIGASEKI 3-CHOME, CHIYODA-KU,  
TOKYO, JAPAN.

Inventors : (1) HIROYUKI ITOH, (2) YOSHITSUGU KONO,  
(3) MASANOBU AJIOKA, (4) SHINJI TAKENAKA, (5) MASA-  
FUMI KATAITA.

Application No. 488/Cal/87, filed on 22nd June, 1987.

Appropriate Office for Opposition Proceedings (Rule 4, Patents  
Rules, 1972), Patent Office, Calcutta.

A process for producing chlorine by reacting hydrogen chloride and oxygen in the presence of a catalyst, which contains a chromium oxide as a principal component thereof, in a fluidized-bed reactor, which comprises :

- (i) providing, as said reactor, a fluidised-bed reactor whose gas-contacting portions are each made of a material having an iron content of 1 wt% or less, said latter reactor having an equivalent diameter of at least 0.05 m;
- (ii) filling, as the catalyst, a chromium oxide catalyst, which has a mean particle size of 40–100  $\mu$ m and a maximum particle size of 200  $\mu$ m or smaller and contains at least 10 wt% of particles having particle sizes of 40  $\mu$ m and smaller, in the thus-provided fluidized-bed reactor, said chromium oxide catalyst being filled in an amount of at least 0.1 m in terms of catalyst layer height in the thus-provided reactor when the chromium oxide catalyst is at rest;
- (iii) feeding a first feed gas as an oxygen source and a second feed gas as a hydrogen chloride source into the thus-provided reactor in such amounts that the molar ratio of oxygen in the first feed gas to hydrogen chloride in the second feed gas is at least 0.25 and the hydrogen chloride in the second feed gas is fed at a rate of 100–1800 Ne per hour and per kg of the chromium oxide catalyst filled in the thus-provided reactor;
- (iv) allowing the first and second feed gases to flow upwardly at a superficial velocity 0.1–1 m/sec through the thus-provided reactor; and
- (v) controlling the internal temperature and pressure of the thus-provided reactor at 350–450°C and at least normal pressure respectively.

Compl. Specn. 28 Pages.

Drg. Nil.

CLASS : 20 B.  
Int. Cl. : F 16 j 15/30.

168733

# SEAL RING ASSEMBLY FOR USE IN AN END FACE MECHANICAL SHAFT SEAL.

Applicants : (1) HITACHI LTD., OF 6, KANDA SURUGADAI  
4-CHOME, CHIYODA-KU, TOKYO, JAPAN; AND 2) THE KAN-  
SAI ELECTRIC POWER CO. INC., OF 3-22, NAKANSHIMA-3-  
CHOME, KITA-KU, OSAKA, JAPAN.

Inventors : (1) OSAMU SUGIMOTO, (2) TEIJI HORITA, (3)  
KATSUTOSHI NIL, (4) KOOZI AIZAWA, (5) KAZUHIKO  
KAWAIKE, (6) ICHIRO HITOMI, (7) HISAO INOUE.

Application No. 574/Cal/87, filed on 27th July, 1987.

Appropriate Office for Opposition Proceedings (Rule 4, Patents  
Rules, 1972), Patent Office, Calcutta.

## 8 Claims

A seal ring assembly for use in an end face mechanical shaft seal, comprising :

an annular ring casing having a substantially annular end face formed therein with a substantially annular groove;

a seal ring partly received in said groove and secured to said ring casing by an adhesive;

said seal ring formed by a plurality of segments each having a substantially arcuate cross-section, substantially cylindrical radially inner and outer surfaces, axial end faces and side faces;

said segments being disposed in said annular groove with one of the end faces of each segment received in said groove and the other end face being offset from said end face of said ring casing axially outwardly thereof;

said segments being arranged in circumferentially side-by-side abutting relationship with each other to form said seal ring;

the other end faces of respective segments being included in a substantially the same plane to provide a substantially smooth and circumferentially substantially continuous sealing surface.

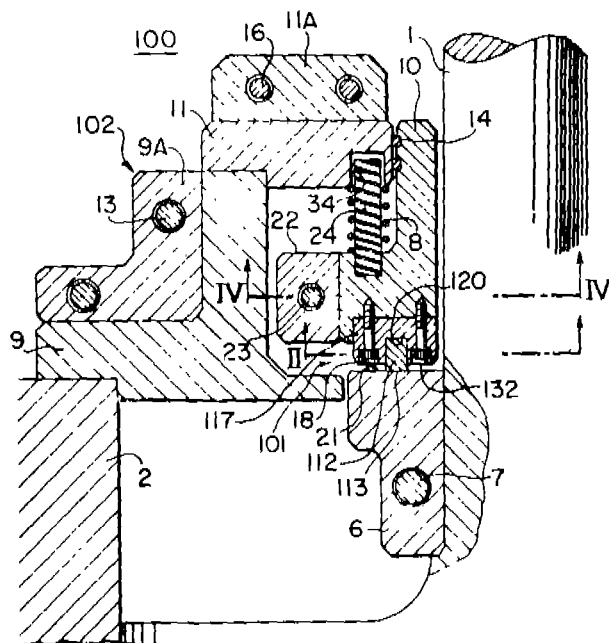


Fig. 1

Compl. Specn. 22 Pages.

Drgs. 7 Sheets.

CLASS : 67-B.

168734

Int. Cl. : A 01 j 5/10.

## A DIAPHRAGM PULSATOR FOR MILKING PLANTS.

Applicant : VEB KOMBINAT FORTSCHRITT LANDMASCHINEN, NEUSTADT IN SACHSEN BERGHAUSSTRASSE 1 8355 NEUSTADT IN SACHSEN, GERMANY.

Inventors : (1) VOLKMAR SPILLECKE, (2) KLAUS MILDE, (3) ALFRED TUTTE.

Application No. 576/Cal/87, filed on 27th July, 1987.

Appropriate Office for Opposition Proceedings (Rule 4, Patents Rules, 1972), Patent Office, Calcutta.

3 Claims

A diaphragm pulsator for milking plants with alternating pulsation and phase displacement, comprising an operating chamber (22) joined with a pair of milk-bucket and controlled by a throttle (17) is subjected to alternating pressures on the diaphragm (6) connected with a valve (8), characterised in that, a second hollow valve (9) having a flange like attachment (x) has a valve seat (10) and is positioned between two other valve seats (11, 12) joined with the said milk-bucket pair at the connecting point (2) and serves a diaphragm (14) meant for separating the low-pressure chamber (19) connected with the vacuum connection (4) over the channel (15) and a chamber (20), which, over the connecting point (3) is joined with the said milk-bucket pair.

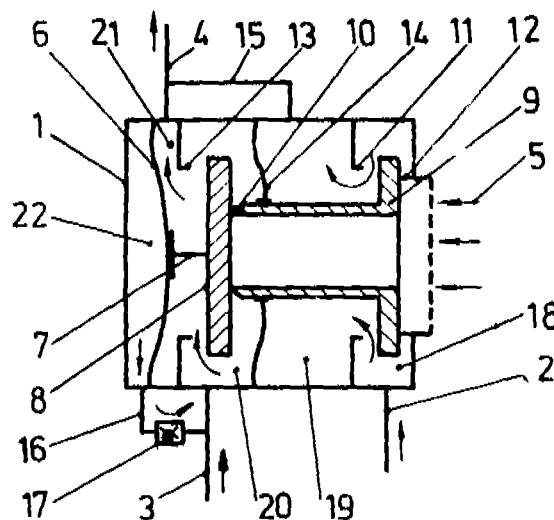


Fig. 1

Compl. Specn. 11 Pages.

Drgs. 3 Sheets.

CLASS : 35-E.

168735

Int. Cl. : C 04 b 35/00.

## A METHOD FOR PRODUCING SELF-SUPPORTING CERAMIC BODY.

Applicant : LANXIDE TECHNOLOGY COMPANY, LP, TRALEE INDUSTRIAL PARK, NEWARK, DELAWARE 19711, U.S.A.

Inventors : (1) MARC STEVENS NEWKIRK, (2) JERRY WEINSTEIN.

Application No. 701/Cal/87, filed on 4th September, 1987.

Appropriate Office for Opposition Proceedings (Rule 4, Patents Rules, 1972), Patent Office, Calcutta.

16 Claims

A method of producing a self-supporting ceramic body comprising the steps of:

(a) taking a first self-supporting ceramic body comprising a first polycrystalline oxidation reaction product formed upon oxidation of a first molten parent metal as defined herein with a first oxidant, as defined herein and having interconnected porosity at least partially accessible from one or more surfaces of said first ceramic body;

(b) orienting a body of second parent metal as defined herein and said first ceramic body relative to each other so that melting and oxidation reaction of said second parent metal with a vapor-phase oxidant will cause formation of a second polycrystalline oxidation reaction product in a direction towards and into said interconnected porosity of said first ceramic body; and

(c) heating said second parent metal to a temperature region above its melting point but below the melting points of both the first and second oxidation reaction products to form a body of molten second parent metal, and within said temperature region;

(i) oxidizing said body of molten second parent metal with said vapor-phase oxidant to form said second polycrystalline oxidation reaction product;

(ii) maintaining at least a portion of said second oxidation reaction product in contact with and between said body of molten second parent metal and said vapor-phase oxidant, whereby said second parent metal is drawn through said second polycrystalline material towards the oxidant so that said oxidation reaction product continues to form at the interface between the vapor-phase oxidant and previously formed second oxidation reaction product; and

(iii) continuing said reaction for a time sufficient to infiltrate at least a portion of said porosity of said first ceramic body with said second oxidation reaction product to get said self-supporting ceramic body.

Compl. Specn. 35 Pages.

Drgs. 5 Sheets.

CLASS : 63-I.

168736

Int. Cl. : H 02 j 3/18.

#### IMPROVED VAR GENERATOR.

Applicant : WESTINGHOUSE ELECTRIC CORPORATION, OF WESTINGHOUSE BUILDING, GATEWAY CENTER, PITTSBURGH, PENNSYLVANIA 15222, U.S.A.

Inventors : (1) MICHAEL BARNABAS BRENNEN, (2) LASZLO GYUGYI.

Application No. 833/Cal/87, filed on 26th October, 1987.

Appropriate Office for Opposition Proceedings (Rule 4, Patents Rules, 1972), Patent Office, Calcutta.

#### 11 Claims

An improved VAR generator comprising first and second reactors connected in series between two transmission lines; at least two static power switches being mounted in antiparallel fashion between said first and second reactors; and means for controlling for conduction said static power switches alternately for each polarity with a selected phase angle established relative to the peak value of the AC voltage

existing between said transmission lines, for generating with said first and second reactors a controlled reactive current  $i_L$  added to said transmission lines for VAR compensation; wherein the improvement comprises the combination of:

integration means for producing an output in response to an input thereof;

simulator means responsive to said controlling means for connecting the input of said integration means to said transmission lines to derive from the voltage thereof an output current initiated concurrently with said controlled reactive current  $i_L$ ;

means responsive to said output current for disconnecting said simulator means from said transmission lines when said output current goes to zero magnitude;

whereby said output current is a current  $i_{LS}$  simulating said reactive current  $i_L$ ;

means responsive to at least one of said first and second reactors for deriving a signal representative of said reactive current  $i_L$ ;

divider means responsive to said reactive current  $i_L$  representative signal and to said output current for deriving a signal representative of the ratio  $i_L/i_{LS}$ ;

means responsive to said ratio representative signal for deriving a command signal when said ratio representative signal exceeds a predetermined critical level; and

means responsive to said command signal for shutting down the static VAR generator.

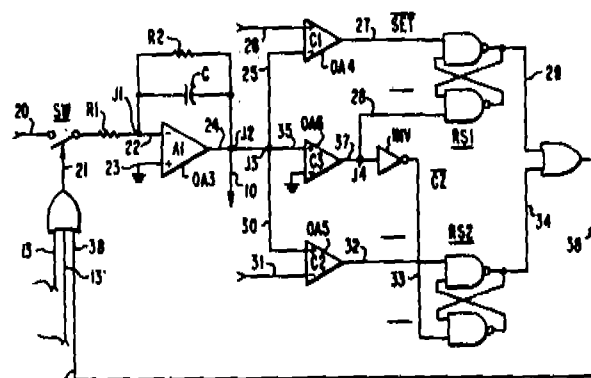


Fig. 4

Compl. Specn. 20 Pages.

Drgs. 7 Sheets.

CLASS : 84—C, 136—K, 141—A.

168737

Int. Cl. : B 30 b 11/16; C 10 1 5/02, 5/06.

#### MACHINE AND PROCESS FOR PRODUCTION OF DOMESTIC FUEL.

Applicant & Inventor : NARAYAN CHANDRA ACHARYYA, OF VILL-KAKURIA, P.O. SAHAJPUR, DIST. BURDWAN, WEST BENGAL, INDIA.

Application No. 130/Cal/88, filed on 15th February, 1988.

(Complete Specification left on 18th March, 1988.)

Appropriate Office for Opposition Proceedings (Rule 4, Patents Rules, 1972), Patent Office, Calcutta.

## 9 Claims

A machine for the production of domestic fuel, as herein defined, comprising a meshing pair of rollers of same diameter, adapted to be rotated in opposite angular direction to each other, each said roller being provided with means for increasing or decreasing the gap therebetween, as desired, and also being provided with or formed thereon with a plurality of die-halves, arranged such that one set of die-halves of one roller mate with a set of the corresponding die-halves of the other roller on meshing of the rollers, in rotation, to define a set of dies along the gap of the rollers, and a feed hopper disposed above the said meshing pair of rollers, characterised in that the said feed hopper is constituted by three sections, disposed laterally side by side, to define two side hopper sections and one middle hopper section, said hopper sections being adapted to feed material therethrough sequentially, the arrangement being such that the said middle hopper section is meant for feeding agro based fuel in finely divided form, with or without a binder, and water, into the dies along the gap of the rollers, while the said two side hopper sections are meant for feeding finely divided carbonaceous material mixed with a binder and water, into the dies along the gap of the rollers, whereby the said agro-based fuel is caused to be encapsulated, under the pressure of the said meshing pair of rollers, within the coating of the said carbonaceous material, to produce the said domestic fuel, on rotation of the rollers.

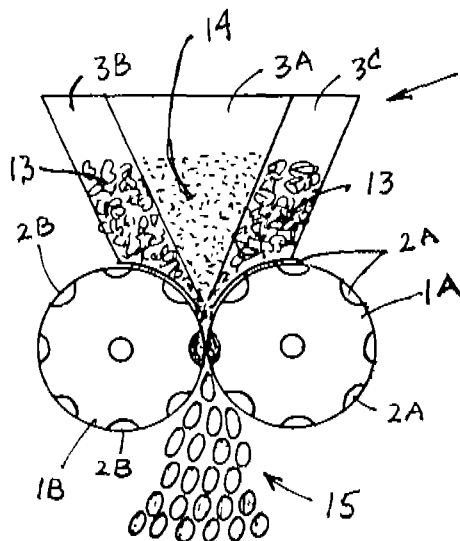


Fig. 1A

Compl. Specn. 10 Pages.  
Provl. Specn. 3 Pages.

Dr. 1 Sheet.  
Dr. Nil.

CLASS: 32—A<sub>1</sub>  
Int. Cl.: C 09 b 27/00, 31/00.

168738

PROCESS FOR THE PREPARATION OF WATER-SOLUBLE MONAZO AND DISAZO COMPOUNDS.

Applicant: HOECHST AKTIENGESELLSCHAFT, D-6230 FRANKFURT AM MAIN 80, F.R. GERMANY.

Inventors: (1) MARCOS SEGAL, (2) MICHAEL KUNZE.

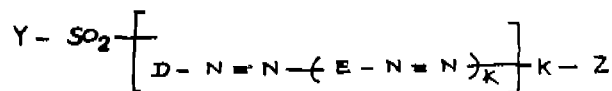
Application No. 247/Cal/88, filed on 24th March, 1988.

[Divisional of Appln. No. 211/Cal/86 Ante-dated to 17th March, 1986.]

Appropriate Office for Opposition Proceedings (Rule 4, Patents Rules, 1972), Patent Office, Calcutta.

## 15 Claims

A process for preparing a water-soluble azo compound conforming to the general formula (1) of the accompanying drawings in which the symbols have the following meanings:



Formula (1)

- K is the number zero or 1; the  $-SO_2-Y$  group is mandatorily bonded to a carbon atom of an aromatic nucleus of D or of an aromatic nucleus of E or of a benzene nucleus of a substituent on D;
- D is the phenyl radical which may be substituted by 1, 2 or 3 substituents which belong to the group of substituents consisting of alkyl of 1 to 4 carbon atoms, alkoxy of 1 to 4 carbon atoms, carboxyl, alkanoylamino of 2 to 5 carbon atoms which may be substituted, optionally substituted benzoylamino, phenylamino, sulfophenylamino, carbamoyl, carbamoyl which is mono-substituted or disubstituted by alkyl of 1 to 4 carbon atoms, sulfamoyl, sulfamoyl which is monosubstituted or disubstituted by alkyl of 1 to 4 carbon atoms, N-phenylsulfamoyl, N-phenyl-N-(C<sub>1</sub>-C<sub>4</sub>-alkyl)-sulfamoyl, cyano, nitro, chlorine, bromine, fluorine, trifluoromethyl, hydroxyl and sulfo, or
- D is a naphthyl radical which may be substituted by 1, 2 or 3 substituents which belong to the group of substituents consisting of sulfo, carboxyl, methyl, ethyl, methoxy, ethoxy, alkanoylamino of 2 to 5 carbon atoms which may be substituted, optionally substituted benzoylamino, chlorine, hydroxyl and nitro, or
- D is the phenyl radical which is substituted by the  $-SO_2-Y$  group shown and may be further substituted by 1 or 2 substituents which belong to the group of substituents consisting of alkyl of 1 to 4 carbon atoms, alkoxy of 1 to 4 carbon atoms, carboxyl, alkanoylamino of 2 to 5 carbon atoms which may be substituted, optionally substituted benzoylamino, phenylamino, sulfophenylamino, carbamoyl, carbamoyl which is monosubstituted or disubstituted by alkyl of 1 to 4 carbon atoms, sulfamoyl, sulfamoyl which is monosubstituted or disubstituted by alkyl of 1 to 4 carbon atoms, N-phenylsulfamoyl, N-phenyl-N-(C<sub>1</sub>-C<sub>4</sub>-alkyl)-sulfamoyl, cyano, nitro, chlorine, bromine, fluorine, trifluoromethyl, hydroxyl and sulfo, or
- D is a naphthyl radical which is substituted by the  $-SO_2-Y$  group shown and can be further substituted by 1 or 2 substituents which belong to the group of substituents consisting of sulfo, carboxyl, methyl, ethyl, methoxy, ethoxy, alkanoylamino of 2 to 5 carbon atoms, which can be substituted, optionally substituted benzoylamino, chlorine, hydroxyl and nitro;

E is the radical of a couplable and diazotizable compound which in the synthesis of compounds (1) serves first as a coupling component and then as a diazo component, and represents a phenylene radical, which can be substituted by 1 or 2 substituents which are selected from the set consisting of 2 alkyl of 1 to 4 carbon atoms, 2 alkoxy of 1 to 4 carbon atoms, 2 chlorine, 1 bromine, 1 alkanoylamino of 2 to 5 carbon atoms, which can be substituted, 1 benzoylamino, 2 sulfo, 1 carboxyl, 1 N, N—dialkylamino having alkyl groups of 1 to 4 carbon atoms each, 1 ureido, 1 phenylureido and 1 alkyl-sulfonylamino of 1 to 4 carbon atoms, or denotes a naphthylene radical, which can be substituted by 1 or 2 sulfo groups or by an alkyl group of 1 to 4 carbon atoms, a nitro group, an alkanoylamino group of 2 to 5 carbon atoms or a benzoylamino group or the  $-\text{SO}_2-\text{Y}$  group shown or which can be substituted by the  $-\text{SO}_2-\text{Y}$  group shown and 1 or 2 sulfo groups and an alkyl group of 1 to 4 carbon atoms, a nitro group, an alkanoylamino group of 2 to 5 carbon atoms or a benzoylamino group, or represents a naphthylene radical, which contains bonded in the ortho-position relative to that azo group to which also the formula radical D is linked an amino group, an alkylamino group of 1 to 4 carbon atoms or an optionally substituted phenylamino group or a hydroxyl group and which can be additionally substituted by 1 or 2 sulfo groups or an alkyl group of 1 to 4 carbon atoms, a nitro group or an alkanoylamino group of 2 to 5 carbon atoms, or additionally by 1 or 2 sulfo groups and an alkyl group of 1 to 4 carbon atoms, a nitro group or an alkanoylamino group of 2 to 5 carbon atoms;

K is a 1-hydroxynaphthylene radical which contains bonded in the 2-position the azo group or is a 2-hydroxynaphthylene radical which contains bonded in the 1-position the azo group, both of which can be substituted by 1 or 2 sulfo groups or by an optionally substituted alkanoylamino group of 2 to 5 carbon atoms or a benzoylamino group or by 1 or 2 sulfo groups and an optionally substituted alkanoylamino group of 2 to 5 carbon atoms or a benzoylamino group, or

K is a naphthylene radical which can be substituted by 1 or 2 sulfo groups, or by 1 or 2 sulfo groups and an optionally monosubstituted or disubstituted amino group, the substituents of the amino group belonging to the groups of substituents consisting of alkyl of 1 to 4 carbon atoms, hydroxyalkyl of 1 to 4 carbon atoms, carboxyalkyl of 2 to 5 carbon atoms, sulfoalkyl of 1 to 4 carbon atoms, sulfatoalkyl of 1 to 4 carbon atoms, cyanoalkyl of 2 to 5 carbon atoms, carbalkoxyalkyl having alkyl radicals of 1 to 4 carbon atoms each, phenylalkyl having an alkyl radical of 1 to 4 carbon atoms, it being possible for the phenyl radical to be substituted by methyl, ethyl, methoxy, ethoxy, chlorine, sulfo and/or carboxyl, phenyl and phenyl which is substituted by alkyl of 1 to 4 carbon atoms, alkoxy of 1 to 4 carbon atoms, chlorine, carboxyl and/or sulfo, or

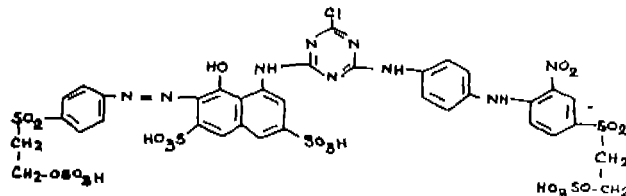
K is a 1-aminonaphthylene radical which contains bonded in the 2-position the azo group or is a 2-aminonaphthylene radical which contains bonded in the 1-position the azo group, it being possible for the two aminonaphthylene radicals to be substituted by 1 or 2 sulfo groups or by a hydroxyl group in the 5-, 6-, 7- or 8-position or by this hydroxyl group and 1 or 2 sulfo groups, or

K is a phenylene radical, which can be substituted by 1 or 2 substituents which belong to the group of substituents consisting of 2 alkyl of 1 to 4 carbon atoms, 2 alkoxy of 1 to 4 carbon atoms, 2 chlorine, 1 bromine, 1 alkanoylamino of 2 to 5

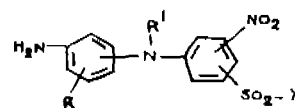
carbon atoms, which can be substituted, 1 benzoylamino, 1 sulfo, 1 carboxyl, 1 ureido, 1 phenylureido, 1 alkylsulfonylamino of 1 to 4 carbon atoms, 1 amino and 1 monosubstituted or disubstituted amino whose substituents are alkyl of 1 to 4 carbon atoms, hydroxyalkyl of 1 to 4 carbon atoms, carboxyalkyl of 2 to 5 carbon atoms, sulfoalkyl of 1 to 4 carbon atoms, sulfatoalkyl of 1 to 4 carbon atoms, cyanoalkyl of 2 to 5 carbon atoms, carbalkoxyalkyl having alkyl radicals of 1 to 4 carbon atoms each, phenylalkyl having an alkyl radical of 1 to 4 carbon atoms, whose phenyl radical can be substituted by methyl, ethyl, methoxy, ethoxy, chlorine, carboxyl and/or sulfo, phenyl and phenyl which is substituted by alkyl of 1 to 4 carbon atoms, alkoxy of 1 to 4 carbon atoms, chlorine, carboxyl and/or sulfo;

Y is the vinyl group or a  $\beta$ -thiosulfatoethyl,  $\beta$ -phosphatoethyl,  $\beta$ -chloroethyl or  $\beta$ -sulfatoethyl group;

Z is a radical of the general formula (3) in which  $\text{R}^1$  stands for a hydrogen atom or an optionally substituted alkyl group of 1 to 4 carbon atoms, it being possible for the two  $\text{R}^1$ s to be identical to or different from each other, R denotes a hydrogen atom or a sulfo group and Y has the abovementioned meaning, it being possible for both Ys to be identical to or different from each other, which comprises reacting a compound of the general formula (7) where D, E, K, Y, k and  $\text{R}^1$  have the meanings mentioned above with an aminodiphenylamine compound of the formula (8) in which  $\text{R}^1$ , R and Y have the meanings mentioned above with elimination of 1 mol. of hydrogen chloride.



Formula (7)



Formula (8)

Compl. Specn. 59 Pages.

Drgs. 6 Sheets.

CLASS : 32A  
Int. Cl. : C 09 b 27/00, 31/00.

168739

# PROCESS FOR THE PREPARATION OF WATER-SOLUBLE MONOAZO AND DISAZO COMPOUNDS.

Applicant : HOECHST AKTIENGESellschaft, C-6230 FRANKFURT AM MAIN 80, F.R. GERMANY.

Inventors : (1) MARCOS SEGAL, (2) MICHAEL KUNZE.

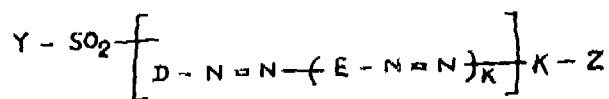
Application No. 248/Cal/88, filed on 24th March, 1988.

[Divisional of Application No. 211/Cal/86 Ante-dated to 17th March, 1986.]

Appropriate Office for Opposition Proceedings (Rule 4, Patents Rules, 1972), Patent Office, Calcutta.

### 11 Claims

1. A process for preparing a water-soluble azo compound conforming to the general formula (1) in which the symbols have the following meanings:



Formula (1)

K is the number zero or 1;

the  $-SO_2-Y$  group is mandatorily bonded to a carbon atom of an aromatic nucleus of D or of an aromatic nucleus of L or of a benzene nucleus of a substituent on D,

D is the phenyl radical which may be substituted by 1, 2 or 3 substituents which belong to the group of substituents consisting of alkyl of 1 to 4 carbon atoms, alkoxy of 1 to 4 carbon atoms, carboxyl, alkanoylamino of 2 to 5 carbon atoms which may be substituted, optionally substituted benzoylamino, phenylamino, sulfophenylamino, carbamoyl, carbamoyl which is monosubstituted or disubstituted by alkyl of 1 to 4 carbon atoms, sulfamoyl, sulfamoyl which is monosubstituted or disubstituted by alkyl of 1 to 4 carbon atoms, N-phenylsulfamoyl, N-phenyl-N-(C<sub>1</sub>-C<sub>4</sub>-alkyl)-sulfamoyl, cyano, nitro, chlorine, bromine, fluorine, trifluoromethyl, hydroxyl and sulfo, or

D is a naphthyl radical which may be substituted by 1, 2 or 3 substituents which belong to the group of substituents consisting of sulfo, carboxyl, methyl, ethyl, methoxy, ethoxy, alkanoylamino of 2 to 5 carbon atoms which may be substituted, optionally substituted benzoylamino, chlorine, hydroxyl and nitro, or

D is the phenyl radical which is substituted by the  $-SO_2-Y$  group shown and may be further substituted by 1 or 2 substituents which belong to the group of substituents consisting of alkyl of 1 to 4 carbon atoms, alkoxy of 1 to 4 carbon atoms, carboxyl, alkanoylamino of 2 to 5 carbon atoms which may be substituted, optionally substituted benzoylamino, phenylamino, sulfophenyl-amino, carbamoyl, carbamoyl which is monosubstituted or disubstituted by alkyl of 1 to 4 carbon atoms, sulfamoyl, sulfamoyl which is monosubstituted or disubstituted by alkyl of 1 to 4 carbon atoms, N-phenyl-sulfamoyl, N-phenyl-N-(C<sub>1</sub>-C<sub>4</sub>-alkyl)-sulfamoyl, cyano, nitro, chlorine, bromine, fluorine, trifluoromethyl, hydroxyl and sulfo, or

D is a naphthyl radical which is substituted by the  $-SO_2-Y$  group shown and can be further substituted by 1 or 2 substituents which belong to the group of substituents consisting of sulfo, carboxyl, methyl, ethyl, methoxy, ethoxy, alkanoylamino of 2 to 5 carbon atoms, which can be substituted, optionally substituted benzoylamino, chlorine, hydroxyl and nitro;

E is the radical of a couplable and diazotizable compound which in the synthesis of compounds (1) serves first as a coupling component and then as a diazo component, and represents a phenylene radical, which can be substituted by 1 or 2 substituents which are selected from the set consisting of

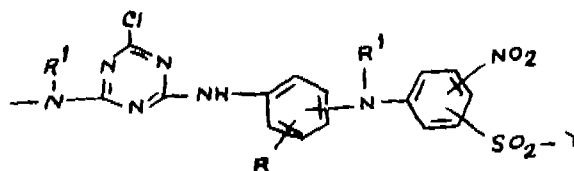
2 alkyl of 1 to 4 carbon atoms, 2 alkoxy of 1 to 4 carbon atoms, 2 chlorine, 1 bromine, 1 alkanoylamino of 2 to 5 carbon atoms, which can be substituted, 1 benzoylamino, 2 sulfo, 1 carboxyl, 1 N, N-dialkyl-amino having alkyl groups of 1 to 4 carbon atoms each, 1 ureido, 1 phenylureido and 1 alkylsulfonlamino of 1 to 4 carbon atoms, or denotes a naphthylene radical, which can be substituted by 1 or 2 sulfo groups or by an alkyl group of 1 to 4 carbon atoms, a nitro group, an alkanoylamino group of 2 to 5 carbon atoms or a benzoylamino group or the  $-SO_2-Y$  group shown or which can be substituted by the  $-SO_2-Y$  group shown and 1 or 2 sulfo groups and an alkyl group of 1 to 4 carbon atoms, a nitro group, an alkanoylamino group of 2 to 5 carbon atoms or a benzoylamino group, or represents a naphthylene radical which contains bonded in the orthoposition relative to the azo group to which also the formula radical D is link an amino group, an alkylamino group of 1 to 4 carbon atoms or an optionally substituted phenylamino group or a hydroxyl group and which can be additionally substituted by 1 or 2 sulfo groups or an alkyl group of 1 to 4 carbon atoms, a nitro group or an alkanoylamino group of 2 to 5 carbon atoms, or additionally 1 or 2 sulfo groups and an alkyl group of 1 to 4 carbon atoms, a nitro or an alkanoylamino group of 2 to 5 carbon atoms;

K is a 1-hydroxynaphthylene radical which contains bonded in the 2-position the azo group or is a 2-hydroxynaphthylene radical which contains bonded in the 1-position the azo group, both of which can be substituted by 1 or 2 sulfo groups or by an optionally substituted alkanoylamino group of 2 to 5 carbon atoms or a benzoylamino group or by 1 or 2 sulfo groups and an optionally substituted alkanoylamino group of 2 to 5 carbon atoms or a benzoylamino group, or

K is a 1-aminonaphthylene radical which contains bonded in the 2-position the azo group or is a 2-aminonaphthylene radical which contains bonded in the 1-position the azo group, it being possible for the two aminonaphthylene radicals to be substituted by 1 or 2 sulfo groups or by a hydroxyl group in the 5-, 6-, 7- or 8-position or by this hydroxyl group and 1 or 2 sulfo groups;

Y is the vinyl group or a  $\beta$ -thiosulfatoethyl,  $\beta$ -phosphatoethyl,  $\beta$ -chloroethyl or  $\beta$ -sulfatoethyl group;

Z is a radical of the general formula (3)



Formula (3)

in which

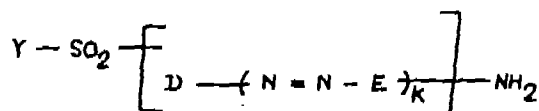
R<sup>1</sup> stands for a hydrogen atom or an optionally substituted alkyl group of 1 to 4 carbon atoms, it being possible for the two R<sup>1</sup>s to be identical to or different from each other,

R denotes a hydrogen atom or a sulfo group and

Y has the abovementioned meaning, it being possible for both Ys to be identical to or different from each other;

which comprises :

coupling of a diazonium compound of an amine of the general formula (11)



Formula (11)

in which Y, D, E and k have the meanings mentioned for the formula (1) with a compound of the general formula H-K-Z where K and Z have the abovementioned meanings.

2. a process as claimed in Claim 1, wherein compound (1) is a compound of the general formula (2)

in which

D<sup>1</sup> in a phenylene radical which can be substituted by 1 or 2 substituents which belong to the group of substituents consisting of alkyl of 1 to 4 carbon atoms, alkoxy of 1 to 4 carbon atoms, alkoxy of 1 to 4 carbon atoms, carboxyl, alkanoyl.

Compl. Specn. 45 Pages.

Drgs. 6 Sheets.

CLASS : 32-F2(b); 55-E2, E4  
Int. Cl. : C 07 d 279/10.

168740

PROCESS FOR THE PREPARING A PYRIDOBENZOTHIADIAZINE DERIVATIVE HAVING ANTIMICROBIAL ACTIVITY.

Applicant : MEDIOLANUM FARMACEUTICI SRL, OF VIA S. GIUSEPPE COTTOLENGO, 31, MILANO, ITALY.

Inventors : (1) GIUSEPPE MASCELLANI, (2) ARNALDO FRAYOLINI.

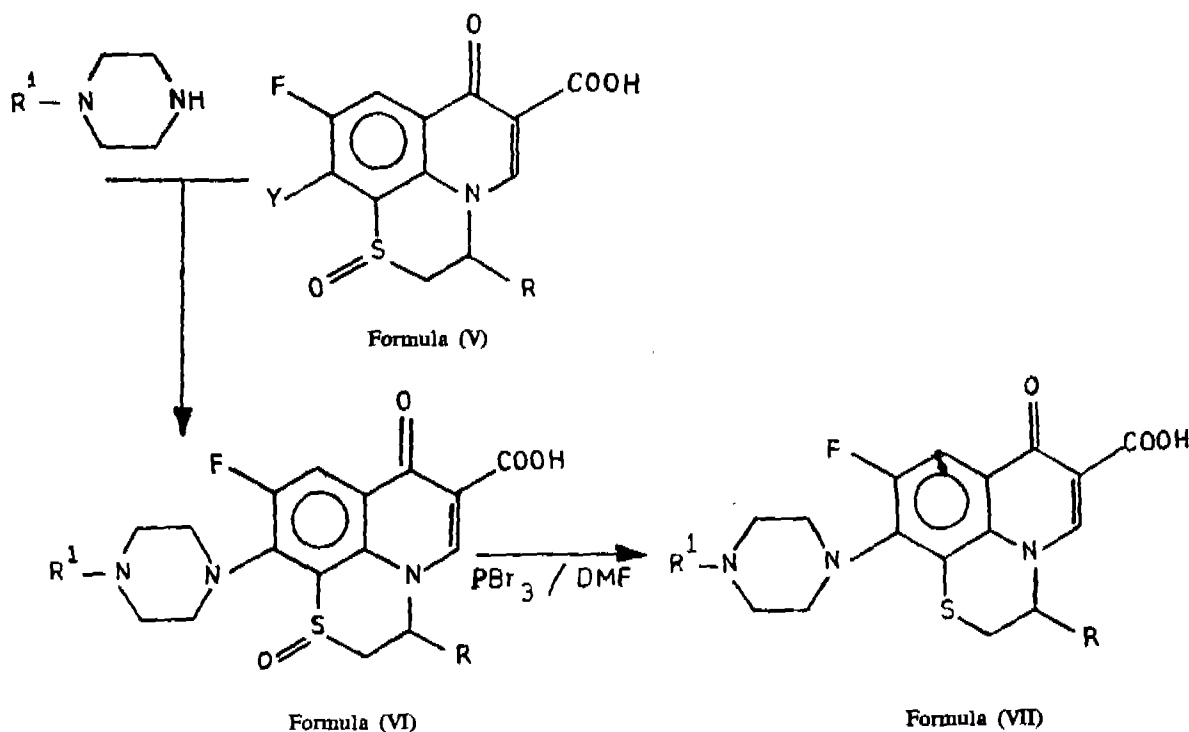
Application No. 363/Cal/89, filed on 11th May, 1989.

[Divisional of Application No. 152/Cal/85 Ante-dated to 1st March, 1985.]

Appropriate Office for Opposition Proceedings (Rule 4, Patents Rules, 1972), Patent Office, Calcutta.

# 1 Claim

A process for the preparation of a pyrido-benzothiazine derivative of formula (VII) as shown in Figure 4 of the accompanying drawings



wherein or is H or CH<sub>3</sub> and R<sup>1</sup> is an alkyl of from 1 to 6 carbon atoms or an alkenyl of from 2 to 6 carbon atoms or an arylalkyl, an arylalkylcarbonyl, an alkylcarbonyl or an alkyloxycarbonyl possibly substituted with halogen or hydroxy groups which comprises oxidizing a carboxylic acid of formula (IV) wherein Y is Cl and R has the abovementioned meanings with lead tetracetate or hydrogen peroxide to produce the corresponding sulfoxide (V) wherein R and Y have the above mentioned meanings, said com-

pound (V) being subjected to nucleophilic substitution in an aprotic solvent at temperatures ranging from 70 to 160°C, whereby the chlorine atom is replaced with an amine to pyrrolidine or piperazine type as shown in figures 1 to 3 and 7 to 10 and 13 of the drawings to produce the substitution product (VI), which is finally reduced by means of treatment with phosphorus tribromide in dimethylformamide at a temperature equal to or lower than 5°C.



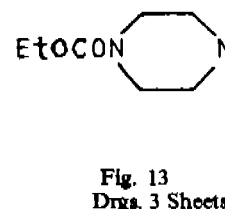
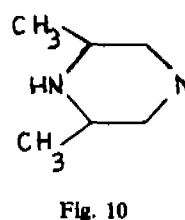
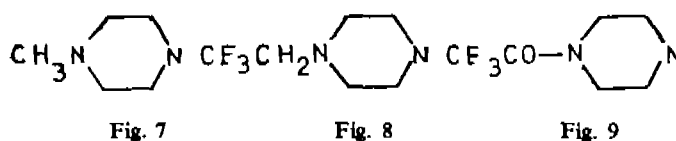
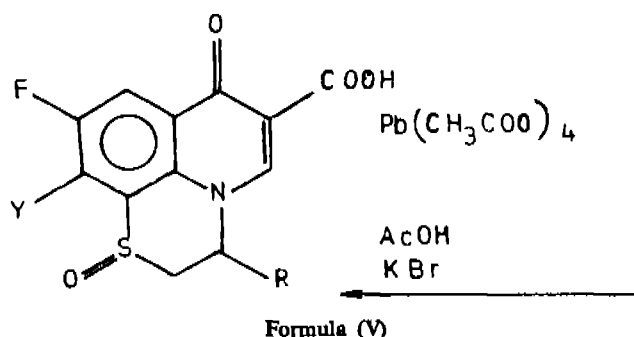
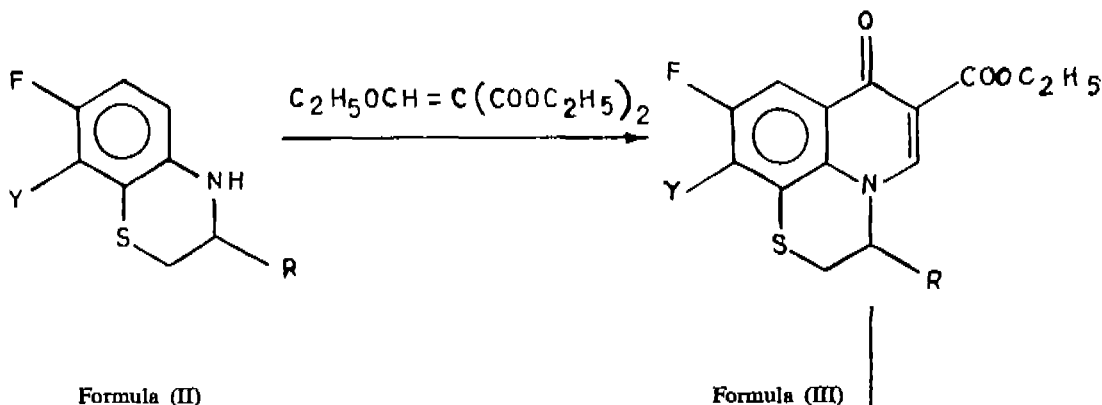


Fig. 1  
Compl. Specn. 15 Pages.

Fig. 2

Fig. 3

Fig. 10

Fig. 13  
Drgs. 3 Sheets.

### REGISTRATION OF DESIGNS

The following design have been registered. They are not open to inspection for a period of two years from the date of registration except as provided for in Section 50 of the Designs Act, 1911.

The date shown in the each entries is the date of the registration in the entry.

Class 1. No. 162640. Artificial Limbs Manufacturing Corpn. of India, Govt. of India Undertaking of G. T. Road, Kanpur-208016, U.P., India. "Wheelchair". November 7, 1990.

Class 1. No. 162646. Danish Container Supply ApS, of Virkelyst 11, DK-9400 Norresundby, Denmark. Danish Company. "Transporting loading and unloading device for containers and platforms". November 8 1990.

Class 1. No. 162670. Krishna Garden Tools, a proprietorship concern of A-881, Arjun Nagar, Kotla Mubarak Pur, New Delhi-110003. "Grass cutter machine". November 15, 1990.

Class 3. No. 162588. The Procter & Gamble Company of One Procter & Gamble Plaza, Cincinnati, State of Ohio, U.S.A. "Bottle". October 23, 1990.

Class 3. No. 162605. Shilpa Plast (India) Pvt. Ltd., an Indian Company of 340, Belgium Tower, Silver Plaza Complex, Ring Road, Surat-395002, Gujarat, India. "Toothbrush". October 30, 1990.

*Copyright extended for the 2nd period of five years.*

Nos. 157019, 157653 to 157655 ..... Class 1.

Nos. 157631 to 157635, 156734, 156883, 156884 & 156957 ... Class 3.

*Copyright extended for the 3rd period of five years.*

No. 157019 ..... Class 1.

R. A. ACHARYA  
CONTROLLER GENERAL OF PATENTS,  
DESIGNS AND TRADE MARKS

